



The City of Lynchburg, Virginia

CITY HALL, LYNCHBURG, VIRGINIA 24505 • (434) 455-3970
FAX (434) 845-0711

February 4, 2005

**NOTICE OF REQUEST FOR BID
FOR
PROPOSED REHABILITATION OF BEDFORD AVENUE BRIDGE
OVER NORFOLK SOUTHERN RAILWAY**

The City of Lynchburg is seeking sealed Bids from qualified firms for the widening and rehabilitation of the bridge on Bedford Avenue over Norfolk Southern Railway, including associated work on roadway approaches.

A mandatory pre-bid conference will be held at 10:00 a.m., February 16, 2005, in the Second Floor Training Room, City Hall, Lynchburg, VA.

Bids will be accepted until, but not later than Wednesday, 3:00 P.M., March 9, 2005, at the address below:

Procurement Division
Attn: Stephanie Suter
Third Floor, City Hall
900 Church Street
Lynchburg, Virginia 24504

Bids received after the above stated time will not be considered.

Questions regarding the solicitation portion of this bid shall be addressed to Stephanie Suter, Buyer, (434) 455-3963, fax number (434) 845-0711, or email to stephanie.suter@lynchburgva.gov.


Stephanie Suter
Buyer

PROJECT MANUAL
SPECIFICATIONS AND OTHER DOCUMENTS FOR
PROPOSED REHABILITATION OF
BEDFORD AVENUE BRIDGE OVER NS RAILWAY

CITY OF LYNCHBURG PROJECT NO. 03036-BR



JANUARY 2005

FINANCIAL SERVICES
PROCUREMENT DIVISION
THIRD FLOOR CITY HALL
LYNCHBURG, VIRGINIA 24505
TELEPHONE (434) 455-3963
FAX (434) 845-0711

HAYES, SEAY, MATTERN & MATTERN, INC.
ARCHITECTS-ENGINEERS-PLANNERS
1315 FRANKLIN ROAD S.W.
ROANOKE, VIRGINIA 24016
HSMM COMMISSION NUMBER 30089

PROJECT MANUAL

FOR

PROPOSED REHABILITATION OF BEDFORD AVENUE BRIDGE OVER NORFOLK SOUTHERN RAILWAY CITY OF LYNCHBURG, VIRGINIA

TABLE OF CONTENTS

<u>BIDDING REQUIREMENTS</u>	Page BR-1 to BR-17
ADVERTISEMENT FOR BIDS	
BID PROPOSAL FORM	
BID ITEM LIST	
ESCROW ACCOUNT ELECTION	
EQUAL OPPORTUNITY REPORT STATEMENT	
CERTIFICATION OF NONDISCRIMINATION AND ANTI-COLLUSION	
QUALIFICATION REPORT	
INSURANCE REQUIREMENTS	
CORPORATE STATUS FORM	
<u>CONTRACT FORMS</u>	Page CF-1 to CF-7
CONSTRUCTION AGREEMENT	
CONTRACT BOND	
ESCROW AGREEMENT	
INSTRUCTIONS TO BIDDERS	
<u>GENERAL CONDITIONS</u>	Page GC-1 to GC-59
<u>SUPPLEMENTAL REQUIREMENTS</u>	Page SR-1 to SR-17
SUPPLEMENTAL REQUIREMENTS	
SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS	

REVISIONS TO VDOT ROAD AND BRIDGE SPECIFICATIONS

SPECIAL PROVISIONS

Project Requirements
Maintenance of Traffic
Low Permeability Concrete
Fences
Concrete Surface Penetrant Sealer
Epoxy Bonding Compound
Anti-Graffiti Protection

ATTACHMENTS

1. LIST OF DRAWINGS - The following drawings accompany the project manual and form a part thereof:

<u>SHEET NO.</u>	<u>TITLE</u>
1	Cover Sheet
2	General Plan, Elevation and General Notes
3	Estimated Quantities and Demolition Details
4	Typical Deck Section
5	Deck Slab Plan
6	Erection Diagram
7	Precast Beam Details
8	Cast-in-Place Concrete Parapet with Sidewalk
9	Pedestrian Fence and Joint Seal Details
10	Water Line System
11	Abutment A Modifications
12	Abutment B Modifications
13	Abutment Wingwall Modifications
14	Sidewalk Abutments – 1 of 2
15	Sidewalk Abutments – 2 of 2
16	Reinforcing Steel Schedules – 1 of 2
17	Reinforcing Steel Schedules – 2 of 2
18	Traffic Control Plan
19	Roadway General Notes and Quantity Summary
20	Typical Sections and Details
21	Road Plan
22	Road Profiles
23	Roadside Development
24	Road Cross Sections

2. Geotechnical Report

ADVERTISEMENT FOR BIDS

Sealed bids for the Proposed Rehabilitation of Bedford Avenue Bridge over Norfolk Southern Railway will be received by the City of Lynchburg, Procurement Division, Third Floor, City Hall, Lynchburg, Virginia until 3:00 p.m., Wednesday, March 9, 2005 and then publicly opened and read aloud in the Bidder's Room, Third Floor, City Hall.

Drawings and Project Manual for the above project may be obtained from the office of Hayes, Seay, Mattern and Mattern, Inc., 1315 Franklin Road, S. W., P. O. Box 13446, Roanoke, Virginia 24034, Telephone (540)857-3100. No partial sets of drawings and/or Project Manual will be provided. Contract Documents may be obtained for a non-refundable fee of \$100 per set. Payment shall be sent to the Reproduction/Shipping Department at the above address and shall indicate if sender is a General Contractor or other than a General Contractor. Please include complete street address with zip code for use by express delivery entities as well as complete mailing address with zip code to avoid delay in receiving transmittals. Also include telephone and facsimile numbers, with area code. Drawings and Project Manual may also be viewed and printed directly from the City's Procurement website: www.lynchburgva.gov/home/index.asp?page=981.

A mandatory pre-bid conference will be held at 10:00 a.m., February 16, 2005 in the 2nd Floor Training Room, City Hall, 900 Church St., Lynchburg, VA. The purpose of this conference is for Bidders to familiarize themselves with the site and the existing conditions and to ask questions pertaining to the contract documents. Bidders are reminded that no oral interpretation of meaning of drawings and specifications can be made. Please bring this Bid package with you to the meeting.

All requests for clarification of or questions regarding this Bid or for additional information must be made in writing, by facsimile (434) 845-0711 or email to stephanie.suter@lynchburgva.gov and received by 2:00 p.m., March 2, 2005. All posted clarifications or addenda must accompany any bid submitted, along with a copy of the original advertisement for bid. Failure to do so may be cause for rejection of the bid as non-responsive.

BID FORM

Stephanie Suter
City of Lynchburg
Procurement Division-Buyer
900 Church Street
Lynchburg, VA 24504

Dear Ms. Suter:

The undersigned, having carefully examined all contract documents for the Proposed Rehabilitation of Bedford Avenue Bridge over Norfolk Southern Railway and also having examined the site and local conditions affecting the work, hereby proposes to furnish all labor, equipment, materials, and services, and to perform all operations necessary to execute and complete the work in accordance with the plans and specifications prepared by Hayes, Seay, Mattern, and Mattern, Inc., together with Addenda Numbered _____, issued during bidding period and hereby acknowledged, subject to the terms and conditions of the Agreement for the amount of:

TOTAL BASE BID:

_____ Dollars
(\$_____).

This contract is to be awarded on the basis of the summation of the several unit price and lump sum items and using the estimated quantities. The above shall be referred to hereinafter as the Base Bid. It is understood that time is of the essence and that all work shall be completed by November 18, 2005. It is understood and agreed that the Owner, in protecting its best interest, reserves the right to reject any or all bids or waive any defects in favor of the City.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the contract documents. It is understood that the Owner reserves the right to raise, lower, or eliminate any quantity or item.

As authorized representative to bind this Company to a Contract, I affirm that we are properly equipped to execute work of the character and extent of the agreement and so covered by this bid and will enter into agreement for the execution and completion of the work in accordance with the specifications of this bid. We further agree that if awarded the contract, we will commence the work within 14 consecutive calendar days of the mutually agreed date stated in the "Notice to Proceed" and will maintain a work force large enough to execute the work and all obligations within the time specified above.

The unit prices listed herein cover the furnishing of all labor, materials, machinery and equipment, and completing the work in accordance with plans, specifications, and contract provisions herein set forth.

We agree to pay as liquidated damages, the sum of One Thousand Dollars (\$1,000.00) for each consecutive calendar day that the Substantial Completion is delayed in accordance with the Contract Agreement.

Enclosed herewith is the following Security, offered as evidence that the undersigned will enter into Agreement for the execution and completion of the work in accordance with the Drawings, Specifications and Project Manual:

Bidder's Bond or Cashiers Check in the amount of: \$_____

Bond Issued by or Name of Bank:_____

The undersigned hereby agrees, if awarded the contract, to execute and deliver to the City within ten (10) days after his receipt of the contract documents, a satisfactory contract bond as required in the amount of one hundred (100) percent of the Base Bid.

The undersigned further agrees that in case of failure on his part to execute the said Agreement within the ten (10) consecutive calendar days after written notice being given on the award of the contract, the monies payable by the Securities accompanying this bid shall be paid to the City of Lynchburg, Virginia, as liquidated damages for such failure; otherwise the Securities accompanying this Bid shall be returned to the undersigned.

Attached herewith is a Certified Anti-Collusion Statement. Failure to sign and notarize this statement may result in rejection of the Bid.

Attached herewith are completed Statement of Experience and Statement of Resources forms which include the information requested.

The undersigned further certifies that this bid is not the result of, or affected by, any act of collusion with another person engaged in the same line of business, or any act of fraud punishable under the Virginia Governmental Frauds Act.

This bid is subject to acceptance within a period of 90 days from this date.

Respectfully submitted,

DATE

CONTRACTOR

CURRENT CONTRACTOR'S VIRGINIA REGISTRATION NO.: _____

ADDRESS

BY:_____

TITLE:_____

BID ITEM LIST

Item No.	Item	Qty	Unit	Unit Price	Total
1	Mobilization	1	LS		
2	Construction Surveying	1	LS		
3	Dismantle and Remove Portion of Existing Structure	1	LS		
4	Concrete Class A3	136.0	CY		
5	Concrete, Class A4	96.9	CY		
6	Reinforcing Steel	16,000	LB		
7	Epoxy Coated Reinforcing Steel	11,450	LB		
8	Prestressed Concrete Box Beams	435	LF		
9	Concrete Parapet	271	LF		
10	Bridge Deck Grooving	190	SY		
11	Structure Excavation	183	CY		
12	Porous Backfill	80	CY		
13	Pedestrian Fence	200	LF		
14	Concrete Surface Penetrant Sealer	459	SY		
15	Concrete Substructure Surface Repair	124	SY		
16	Anti-Graffiti Protection	1	LS		
17	Water Line System	1	LS		
18	Clearing and Grubbing	1	LS		
19	Borrow Excavation	2458	CY		
20	Traffic Maintenance	1	LS		
21	Aggregate Base Material, Type I, No. 21 or 21A	492	TON		
22	Asphalt Concrete Surface Course Type SM-12.5D	155.2	TON		
23	Asphalt Concrete Base Course Type BM-25.0	276.8	TON		
24	Asphalt Concrete Surface Course Type SM-9.5A	47.1	TON		
25	Drop Inlet VDOT Std. DI 3B, L=4'	3	EA		
26	15 inch Conc. Pipe	152	LF		
27	Conn. To Exist. MH	2	EA		
28	Guardrail GR-2	75	LF		
29	Radial Guardrail GR-2	15	LF		

Item				Unit	
No.	Item	Qty	Unit	Price	Total
30	Fixed Object Attachment GR-FOA-I Type II	4	EA		
31	Remove Existing Guardrail	135	LF		
32	Demolition of Pavement (Flexible)	409	SY		
33	Saw Cut Asphalt Pavement (2")	120	LF		
34	City Std Curb and Gutter	70	LF		
35	City Std. Facedown Sidewalk	144.8	SY		
36	City Std. Commercial Driveway Entrance (7")	61.8	SY		
37	Remove Existing Drop Inlet	1	EA		
38	Flowable Backfill	3	CY		
39	Adjust Existing Sanitary Manhole	2	EA		
40	Water Line (Roadway)	1	LS		
41	Drop Inlet Silt Trap	3	EA		
42	Temporary Silt Fence	250	LF		
43	Silt Control Excavation	42	CY		
	Total Base Bid				

ESCROW ACCOUNT ELECTION

If determined to be the successful low bidder(s), the above signed elects to use the Escrow Account Procedure.

Write "Yes" or "No" on above line

In the event the successful bidder elects to use the Escrow Account Procedure, the "Escrow Agreement" Form shall be executed and submitted to the City of Lynchburg Engineering Division within fifteen (15) calendar days after notification. If the "Escrow Agreement" Form is not submitted within the fifteen-day period, the contractor shall forfeit his rights to the use of the Escrow Account Procedure.

Company_____

Authorized Signature_____

EQUAL OPPORTUNITY REPORT STATEMENT

The Bidder shall complete the following statement by checking the appropriate blank as follows.

The Bidder has _____ has not _____ participated in a previous contract subject to the nondiscrimination clause prescribed by Executive Order 10925, dated March 6, 1961, or Executive Order 11114 dated June 22, 1963.

In conjunction with the City of Lynchburg's policy to utilize Minority and Disadvantaged Business Enterprises wherever possible, the Bidder has solicited quotations for labor, material and/or services from the following:

<u>NAME OF FIRM</u>	<u>PERSON(S) CONTACTED</u>	<u>DATE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Of those listed above, we intend, at this time, to utilize the following in the completion of the work required by this contract:

"This firm assures that it will give its best efforts to utilize Disadvantaged Business Enterprises whenever possible."

CERTIFIED BY: _____ (Signature)

_____ (Typed/Printed name & Title)

BIDDER'S NAME: _____

IRS NUMBER: _____

_____ This firm shall perform all construction with its own employees and, therefore, is not required to solicit quotations from DBE's.

FAILURE TO DOCUMENT AND REPORT DBE CONTACTS ON THIS FORM MAY BE A BASIS FOR REJECTION OF THE BID AS NONCONFORMING.

CERTIFICATION OF NONDISCRIMINATION AND ANTI-COLLUSION

By submitting their bids, all bidders certify to the City of Lynchburg, VA that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginian's With Disabilities Act, the Americans With Disabilities Act, Section 2.2-4311 of the Virginia Public Procurement Act, and the Lynchburg Procurement Ordinance:

In every contract over \$10,000, the provisions below apply:

1. During the performance of this contract, the contractor agrees as follows:
 - A. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - B. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
 - C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
2. The contractor will include the provisions of the foregoing paragraphs A, B and C in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

Certified by: _____ (corporate seal)

Date: _____

Note: I hereby certify that this bid is not the result of, or affected by, any act of collusion with another person engaged in the same line of business, or any act of fraud punishable under the Virginia Commonwealth Frauds Act.

_____ (seal)

Acknowledged before me this _____ day of _____, _____

Notary Public

My commission expires: _____

STATEMENT OF EXPERIENCE

Proposer: _____

How Long In Business: _____ *At Current Address:* _____

Principals: _____ *Title:* _____
_____ *Title:* _____
_____ *Title:* _____

Type of Work Normally Performed: _____

Projects of this type previously completed:

1. _____
_____ *Amount \$* _____
2. _____
_____ *Amount \$* _____
3. _____
_____ *Amount \$* _____

Reference (for Projects listed above):

1. _____
_____ *Tel. No.* _____
2. _____
_____ *Tel.No.* _____
3. _____
_____ *Tel. No.* _____

STATEMENT OF AVAILABLE RESOURCES

Equipment: _____

Number of Personnel Currently Employed: _____

Number of Personnel Available for Project: _____

Other Pertinent Information: _____

CORPORATE STATUS FORM

ALL PROSPECTIVE FIRMS MUST RESPOND TO THE FOLLOWING

If a limited liability company, limited liability partnership or a limited partnership indicate below:

- Check one: ☐ Limited liability company
- ☐ Limited liability partnership
- ☐ Limited partnership

Have you registered with the State Corporation Commission, to conduct business in Virginia?
☐ Yes ☐ No

Name and address of organizer: _____

List who is authorized to execute contracts: _____

If conducting business under an assumed business name, fill out the following information:

Name of assumed business: _____

Owner's name and address: _____

Registration date: _____ Expires: _____

If conducting business as a sole proprietorship, fill out the following information:

Individual's name liable for all obligations of business: _____

If you are a sole proprietor using an assumed name, please list below:

Registration date: _____ Expires: _____

INSURANCE REQUIREMENTS

The contractor/vendor shall procure, maintain, and provide proof of insurance coverage for injuries to persons or damages to property which may arise from or in connection with the work performed on behalf of the City by the contractor, his agents, representative, employees, or subcontractor. Such coverage shall be maintained by the contractor/vendor for the duration of the contract period.

Broad Form Commercial General Liability:
(Occurrence Form CG0001, Ed. 11/88):

\$1,000,000 CSL, BI &PD

Automobile Liability:

Code 1 "ANY AUTO" (Form CA0001 Ed. 6/92):

\$1,000,000 CSL, BI & PD

Workers' Compensation: Statutory Amount

Please state your ability to comply with these requirements _____

YES NO

The insurance policies shall include or be endorsed to include the following provisions.

1. The City of Lynchburg, Virginia its officers/officials, employees, agents, and volunteers (the City), and Hayes, Seay, Mattern & Mattern, Inc. (HSMM), its employees and agents, shall be added as “insureds” under the terms and conditions of the policies for liabilities which may arise out of the contractor/vendor’s operations or activities in these projects.
2. Any deductibles or self-insured retentions applicable to required coverages shall be paid by the contractor/vendor, and the City shall not be required to participate therewith.
3. The contractor/vendor shall agree to provide the City and HSMM with 30 days written notice of any cancellation of or reduction in the required coverages.
4. The insurance required hereunder shall be primary and any insurance or self-insurance maintained by the City or HSMM shall be excess of the contractors/vendor’s insurance and shall not contribute therewith.
5. Failure of the contractor/vendor to comply with any reporting provisions of the insurance policies required hereunder shall not affect coverage provided to the City.
6. All rights of subrogation against the City or HSMM shall be waived.
7. The contractor/vendor shall provide the City with certificate of insurance with applicable endorsements effecting coverages, signed by a person authorized by the insurance company to bind coverage on its behalf. Certificates of insurance shall be received by the City within 5 days of notice of intent to award. Please state ability to comply _____.
8. All coverages for subcontractors of the contractor/vendors, if any, shall be subject to all of the requirements stated herein.

INSTRUCTIONS TO BIDDERS

DESCRIPTION OF WORK

The work included under this contract shall consist of all labor, materials, equipment, and the performance of all work necessary to complete the project known as “Proposed Rehabilitation of Bedford Avenue Bridge over Norfolk Southern Railway.” This work shall be performed in accordance with the project plans, specifications and Project Manual.

1. General: To be valid for consideration, bids must be completed and submitted in accordance with these instructions to bidders. All individual bid unit price items must be filled in regardless of the quantity shown.
2. Bidding documents will be provided as indicated in the Advertisement.
3. Qualification of Bidders: Each bidder must be prepared to submit within five calendar days of the Owner’s request written evidence of their qualifications for the project including financial data, previous experience, and evidence of authority to conduct business in the jurisdiction where the project is located.
4. Examination of Bid Documents and Site:
 - 4.1 Before submitting bids, each bidder must examine bid documents thoroughly; familiarize themselves with Federal, State and local laws, ordinances, rules, and regulations affecting the work; and correlate their observations with requirements of the bid documents.
 - 4.2 Bidders are requested and expected to visit the site of the project to alert themselves to local and special conditions which may be encountered during construction of the project such as: Labor and transportation, handling and storage of materials, the availability of materials, and site access. Failure to make such investigations shall not relieve the successful bidder from performing and completing the work in accordance with the contract documents.
 - a. A mandatory pre-bid conference will be held at the time and place stated in the Advertisement.
5. Clarification:
 - 5.1 No oral clarification of the bid documents will be made to any bidder. To be given consideration, requests for clarification must be received in time to allow preparation of written response at least seven (7) days prior to date fixed for opening of bids. Clarifications will be issued in the form of written addenda to the bid documents and posted to the Procurement Website within five (5) days of the bid opening. Only clarification by formal written addenda will be binding.
 - 5.2 All communications in regard to clarifications and any other matters related to this project shall be addressed to: Stephanie Suter, Procurement Division, 900 Church Street, Lynchburg, VA 24504, Fax:434-845-0711, email: stephanie.suter@lynchburgva.gov

6. Substitutions:

- 6.1 Substitutions of material or equipment or both may be offered by the Contractor with his bid, provided that, if approved:
- a. No major changes in the construction or design intent of the project would be required. Changes required to accommodate substituted items shall be made by the Contractor at no additional cost or time delay.
 - b. Features of quality, capacity, construction, performance, appearance, size, arrangement, and general utility including economy of operation of substitutes offered, either parallel or exceed those of specified products.
 - c. The provisions of the General Requirements and any other guarantees, if required by the specification sections, shall apply in full force and effect to the performance of such substitute products, approved for incorporation into the Work.
- 6.2 Technical data covering the proposed substitution shall be furnished with the bid when possible, and not later than 10 days after bid submission.

7. Bid Submission:

- 7.1 Submit bids using forms furnished in the Project Manual and fill in all blank spaces on the form. Repeat notation "Contractor's Current Virginia License No. _____" on outside of inner envelope containing bid and bid security, and place this envelope within another envelope addressed to:

City of Lynchburg
Procurement Division
900 Church Street
Third Floor, City Hall
Lynchburg, VA 24504

Bidders shall include the following with their bid submission:

- Bid Proposal Form
- Statement of Experience
- Statement of Available Resources
- Equal Opportunity Report Statement
- Certification of Nondiscrimination and Anti-Collusion (failure to sign and notarize this statement may result in rejection of the bid)
- Insurance Requirements
- Corporate Status Form

- 7.2 Both the inner and outer envelopes shall have noted thereon:

- a. "Sealed Bid Enclosed for the Proposed Rehabilitation of Bedford Avenue Bridge over Norfolk Southern Railway";
- b. Project Number;

- c. The bidder's name and address;
 - d. Repeat notation "Current Registered Virginia Contractor No. _____" on the outside envelope.
- 7.3 Each bid must be accompanied by a cashier's check on a bank satisfactory to the City or a Bid Bond in the amount of five percent (5%) of the amount of the total base bid, made payable to the City, as assurance that the successful bidder will enter into contract within ten (10) days after notification of Intent to Award.

If the successful bidder default's by failure to enter into contract and filing applicable bonds, the certified check or Bid Bond accompanying the successful bid shall be collected by the City, not as a penalty but as liquidated damages for delays and such additional expenses as may be incurred by the City for reasons of such default.
- 7.4 Contractors will indicate a unit price for each item listed on the bid form. The listed bid items are to contain all necessary cost required for completion of the item of work. Any changes, erasures, modifications, or deletions in the bid form, or alternate proposals not specified in the bid proposal shall make the proposal irregular and subject to rejection.
- 7.5 Receipt deadline for bids will be as stated in the Advertisement.
 - a. No bidder shall withdraw, modify, or cancel any part of his bid for the number of days stated on the Bid Form following this date and time except as provided by Sec.2.2-4309 Virginia Public Procurement Act.
- 7.6 Bids will be opened publicly in accordance with Advertisement.
- 7.7 Withdrawal of bids after date for submission: In accordance with the provisions of sec. 2.2-4330 of the Virginia Public Procurement Act, a bidder will have two business days after the opening of bids within which to claim, in writing, any mistake as defined and withdraw their bid, provided such mistake be proved from the Contractor's work papers.
 - a. Definition: Contractor's work papers are the original work papers, documents, and materials used in the preparation of the bid as referred to in Section 2.2-4330 of the Virginia Public Procurement Act.
- 8. Bonds and Damages:
 - 8.1 Bonds shall be with a surety company acceptable to the Owner.
 - 8.2 A performance bond and a labor and material payment bond will be required in the amount of 100 percent of the bid.
 - 8.3 Liquidated damages shall be paid as indicated in the Construction Agreement.
- 9. Award of Contract:

- 9.1 The award of the contract will be the responsible bidder submitting the lowest base bid whose qualifications indicate the award will be in the best interest of the Owner and whose bid meets the prescribed requirements.

Selection of the successful project contractor will include a serious evaluation of whether the competitor has conscientiously attempted to meet DBE goals. A requirement of the contract agreement will be that a genuine concerted effort will be utilized to meet the contract goal.

- 9.2 Before the contract is awarded, the Contractor submitting the lowest bid must satisfy the City that they have the requisite organization, capital, equipment, ability, personnel, and at least five years experience in municipal type work for which they have submitted a bid. Each bidder shall, with his bid, submit a list of at least five projects of similar size and dollar value completed within the last five years, giving location, dollar value, year completed, and the name(s) of the Owner(s) and Engineer(s). The Contractor shall verify to the City that have sufficient and qualified personnel to provide for the contact work and have the ability to provide the necessary materials and equipment on an emergency basis during non-regular hours. Failure by the lowest bidder to sufficiently satisfy the City on their ability to meet any of the above requirements will serve as grounds for rejection of the bid.

- 9.3 The Owner reserves the right to reject any and all bids and waive any and all informalities and the right to disregard all conforming or conditional bids or counterproposals.

- 9.4 Unless canceled or rejected, a responsive bid from the lowest responsible bidder shall be accepted as submitted, except that if the bid from the lowest responsible bidder exceeds available funds, pursuant to Section 18-158 of the Lynchburg Procurement Ordinance, the Owner may negotiate with the apparent low bidder to obtain a contract price within available funds.

- a. Procedures for Negotiations: If the Owner wishes to negotiate with the apparent low bidder to obtain a contract price within available funds, negotiations shall be conducted in accordance with the following procedures:
1. The using agency shall provide the City Manager, with a written determination that the apparent low bid exceeds available funds. Said determination shall be confirmed in writing by the Director of Finance or his designee. The using agency shall also provide the appropriate City Manager with a suggested reduction in scope for the proposed purchase.
 2. The Director of the using agency shall advise the lowest responsible bidder, in writing, that the proposed purchase exceeds available funds. The Director shall further suggest a reduction in scope from the proposed purchase, and invite the lowest responsible bidder to amend its bid proposal based upon the proposed reduction in scope. All such correspondence shall be coordinated through and in collaboration with the City's Procurement Office.

3. Repetitive informal discussions with the lowest responsible bidder for purposes of obtaining a contract within available funds shall be permissible.
 4. The lowest responsible bidder shall submit a written Addendum to its original bid, which Addendum shall include: The change in scope for the proposed purchase, the reduction in price, and the new contract value.
 5. If the proposed Addendum is acceptable to the Owner, the Owner may award a contract within funds available to the lowest responsible bidder based upon the amended bid proposal.
 6. If the Owner and the lowest responsible bidder cannot negotiate a contract within available funds, all bids shall be rejected.
- 9.5 Submission of post-bid information shall be in accordance with the contract documents.

End of Instructions to Bidders

CONSTRUCTION AGREEMENT

This Agreement made and entered into on the ____ day of _____, 20____, by and between _____, party of the first part, hereinafter referred to as Contractor, and the City of Lynchburg, a municipal corporation of the Commonwealth of Virginia, party of the second part, hereinafter referred to as the Owner.

That the Contractor, for the consideration hereinafter fully set out, hereby agrees with the Owner as follows:

1. That the Contractor shall furnish all labor, materials, tools, and equipment and perform all work in manner and form as contained in the Project Manual and Drawings, dated _____ for the and all other specifications as referenced in these documents.

2. That the Contractor shall commence work within ten (10) days after award of the Contract and Notice to Contractor to Proceed with the work under contract, and shall substantially complete the work by November 18, 2005. Owner and Contractor recognize that time is of the essence of this Agreement and that the Owner will suffer financial loss if the work is not completed within the times specified in the Notice To Proceed, plus any extensions thereof allowed in accordance with the General Conditions. They also recognize the delays, expense and difficulties involved in providing the actual loss suffered by Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay One Thousand Dollars (\$1000.00) for each day that expires after the time specified for completion. If the Contractor is subject to liquidated damages the City has the right to withhold the liquidated damages from the Contractor's regular payments or retainage.

3. The Owner hereby agrees to pay the Contractor for the faithful performance of this Agreement subject to additions and deductions as provided in the Specifications or Proposal, in lawful money of the United States, as follows:

Dollars

(\$ _____)

4. The Owner shall make partial payment on a monthly basis to the Contractor on the basis of a duly certified and approved estimate of work performed during the preceding calendar month by the Contractor, less five percent (5%) of the amount of such estimate which is to be retained by the Owner until all work has been performed strictly in accordance with this Agreement and until such work has been accepted by the Owner.

5. Upon submission by the Contractor of evidence satisfactory to the Owner that all payrolls, material bills and other costs incurred by the Contractor in connection with the construction of the work have been paid in full, final payment on account of this Agreement shall be made within 90 days after the completion by the Contractor of all work covered by this Agreement and the acceptance of such work by the Owner.

6. It is further mutually agreed between the parties hereto that if, at any time after the execution of this Agreement and Surety Bond hereto attached for its faithful performance, the Owner shall deem the surety or sureties upon such bond to be unsatisfactory, or if for any reason, such bond ceases to be adequate to cover the performance of the work, the Contractor shall at its expense, within five (5) days after the receipt of notice from the Owner so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the owner. In such event no further payment to the Contractor shall be deemed to be due under this Agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the Owner.

7. Contractor agrees to fulfill all requirements of State, Federal, and Municipal laws which may be applicable to this project.

This Agreement is executed in two counterparts, each of which shall, without proof or accounting for the other counterparts, be deemed an original contract.

IN WITNESS WHEREOF, _____ has caused its name to be subscribed to this Agreement by _____, its _____, and its corporate seal to be hereunto affixed and attested by _____, its _____, said officers being duly authorized therefore; and the City of Lynchburg has caused its name to be hereunto subscribed by Walter Erwin, its Acting City Manager, and its corporate seal to be hereunto affixed and attested by Patricia Kost, its Clerk of Council, said officers being duly authorized therefore, all as to the day and year first above written.

(Contractor)

(SEAL)

BY: _____

ATTEST: _____

CITY OF LYNCHBURG

(SEAL)

BY: _____
City Manager

ATTEST:

Clerk of Council

APPROVED:

City Attorney

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Hereinafter called the Principal) and _____
(Hereinafter called the Surety) are held and firmly bond unto the City of Lynchburg, a Municipal Corporation of the Commonwealth of Virginia (Hereinafter called the Owner) in the penal sum of _____

_____ DOLLARS

(\$ _____) for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns for the faithful performance of a certain written contract, dated the _____ day of _____, 20____, entered into between the Principal and City of Lynchburg, for _____ (project).

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall faithfully perform the terms and conditions of the contract in all respects on his or its part and shall fully pay all obligations incurred in connection with the performance of such contractor on account of labor and materials used in connection therewith and all such obligations of every form, nature, and character, and shall save harmless the Owner from any and all liability of every nature, kind, and character which may be incurred in connection with the performance or fulfillment of such contract on the part of the Principal or other such liability resulting from negligence or otherwise on the part of the Principal, and further shall save harmless the Owner from all costs and damage which may be suffered by reason of the failure of the Principal to fully and completely perform said contract, and shall fully reimburse and repay the Owner for all expenditures of every kind, character, and description which may be incurred by the Owner in connection with making good any and every default which may exist on the part of the Principal in connection with the performance of said contract; and further that if the Principal shall pay all lawful claims of all persons, firms, partnerships or corporations for labor performed and materials furnished in connection with the performance of the contract (we agreeing that failure so to do shall give such persons, firms, partnerships or corporations a direct right of action against either the Principal or Surety under this obligation, or both said Principal and Surety), then this obligation shall be void, otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated;

PROVIDED HOWEVER, that this bond is issued subject to the following conditions and privileges:

1. That no suit, action or proceeding by reason of any default whatever on the part of the Principal shall be brought on this bond after one year from the date on which final payment on the contract falls due;
2. That any alterations or additions which may be made under the contract or the work to be done under it or the giving by the Owner of any extension of time for the performance of the Contract, or any other forbearance on the part of either the Owner or the Principal shall not in any way release the Principal and Surety, or either of them, their heirs, executors, administrator, successors or assigns, from their liability hereunder, notice to the Surety of any such alterations, extensions or forbearances being expressly waived.

Executed in two counterparts.

IN WITNESS WHEREOF, _____, the Principal, has caused its name to be hereunto subscribed and its corporate seal to be hereunto affixed and duly attested by its proper officers heretofore duly authorized this _____ day of _____, 20____, and the Surety has caused its name to be hereunto subscribed and its seal affixed by its authorized Attorney-in-Fact.

BY: _____
President

(SEAL)

ATTEST:

Secretary

BY: _____
Attorney-in-Fact

ESCROW AGREEMENT

THIS AGREEMENT, made and entered into this ____ day of _____, 20____ by,
between and among the City of Lynchburg ("City"), _____ ("Contractor"),

(Name of Bank)

(Address of Bank)

a trust company, bank, or savings and loan institution with its principal office located in the Commonwealth of Virginia (hereinafter referred to collectively as "Bank"), and

("Surety") provides:

I.

The City and the Contractor have entered into a contract with respect to City.

Project No. and Name: _____ ("the Contract").

This agreement is pursuant to, but in no way amends or modifies, the Contract. Payments made hereunder or the release of funds from escrow shall not be deemed approval or acceptance of performance by the Contractor.

II.

In order to assure full and satisfactory performance by the Contractor of its obligations under the Contract, the City's Director of Finance is required thereby to retain certain amounts otherwise due the Contractor. The Contractor has, with the approval of the City, elected to have these retained amounts held in escrow by the Bank. This agreement sets forth the terms of the escrow. The Bank shall not be deemed a part to, bound by, or required to inquire into the terms of, the Contract or any other instrument or agreement between the City and the Contractor.

III.

The City shall from time to time pursuant to its contract pay to the Bank amounts retained by it under the Contract. Except as to amounts actually withdrawn from escrow by the City, the Contractor shall look solely to the Bank for payment of funds retained under the Contract and paid by the City to the Bank.

The risk of loss by diminution of the principal of any funds invested under the terms of this contract shall be solely upon the Contractor.

Funds and securities held by the Bank pursuant to this Escrow Agreement shall not be subject to levy, garnishment, attachment, lien, or other process whatsoever. Contractor agrees not to assign, pledge,

discount, sell or otherwise transfer or dispose of his interest in the escrow account or any part thereof, except to the Surety.

IV.

Upon receipt of checks or warrants drawn by the Director of Finance and made payable to it as escrow agent, the Bank shall promptly notify the Contractor, negotiate the same and deposit or invest and reinvest the proceeds in approved securities in accordance with the written instruction of the Contractor. In no event shall the Bank invest the escrowed funds in any security not approved.

V.

The following securities, and none other, are approved securities for all purposes of this Agreement:

- (1) United States Treasury Bonds, United States Treasury Notes, United States Treasury Certificates of Indebtedness or United States Treasury Bills,
- (2) Bonds, notes and other evidences of indebtedness unconditionally guaranteed as to the payment of principal and interest by the United States,
- (3) Bonds or notes of the City,
- (4) Bonds of any political subdivision of the City, if such bonds carried, at the time of purchase by the Bank or deposit by the Contractor, a Standard and Poor's or Moody's Investors Service rating of at least "A", and
- (5) Certificates of deposit issued by commercial Banks located within the Commonwealth, including, but not limited to, those insured by the Bank and its affiliates,
- (6) Any bonds, notes, or other evidences of indebtedness listed in Section (1) through (3) may be purchased pursuant to a repurchase agreement with a Bank, within or without the City having a combined capital, surplus and undivided profit of not less than \$25,000,000 provided the obligation of the Bank to repurchase is within the time limitations established for investments as set forth herein. The repurchase agreement shall be considered a purchase of such securities even if title, and/or possession of such securities is not transferred to the Escrow Agent, so long as the repurchase obligation of the Bank is collateralized by the securities themselves, and the securities have on the date of the repurchase agreement a fair market value equal to at least 100 percent of the amount of the repurchase obligation of the Bank, and the securities are held by a third party, and segregated from other securities owned by the Bank.

No security is approved hereunder, which matures more than five years after the date of its purchase by the Bank or deposit by the Contractor.

VI.

The Contractor may from time to time withdraw the whole or any portion of the escrowed funds by depositing with the Bank approved securities in an amount equal to, or in excess of, the amount so withdrawn. Any securities so deposited or withdrawn shall be valued at such time of deposit or withdrawal at the lower of par or market value, the latter as determined by the Bank. Any securities so deposited shall thereupon become a part of the escrowed fund.

Upon receipt of a direction signed by the City's Director of Public Works or the City Engineer, the Director of Finance or the City Accountant shall authorize the Bank to pay the principal of the fund, or any specified amount thereof, to the account of the City of Lynchburg. Such payment shall be made in cash as soon as is practicable after receipt of the direction.

Upon receipt of a direction signed by the City's Director of Public Works or the City Engineer, the Director of Finance or the City Accountant shall authorize the Bank to pay and deliver the principal of the fund, or any specified amount thereof, to the Contractor, in cash or in kind, as may be specified by the Contractor. Such payment and delivery shall be made as soon as is practicable after receipt of the direction.

VII.

For its services, hereunder the Bank shall be entitled to a reasonable fee in accordance with its published schedule of fees or as may be agreed upon by the Bank and the Contractor. Such fee and any other costs of administration of this Agreement shall be paid from the income earned upon the escrowed fund and, if such income is not sufficient to pay the same, by the Contractor.

VIII.

The net income earned and received upon the principal of the escrowed fund shall be paid over to the Contractor in quarterly or more frequent installments. Until so paid or applied to pay the Bank's fee or any other costs of administration such income shall be deemed a part of the principal of the fund.

IX.

The Surety undertakes no obligation hereby but joins in this Agreement for the sole purpose of acknowledging that its obligations as surety for the Contractor's performance of the Contract are not affected hereby.

WITNESS the following signatures, all as of the day and year first above written.

CITY OF LYNCHBURG

CONTRACTOR: _____

BY: _____
City Manager

BY: _____
Officer, Partner, or Owner (Seal)

GENERAL CONDITIONS

ARTICLE 1	CONTRACT DOCUMENTS
ARTICLE 2	ARCHITECT/ENGINEER
ARTICLE 3	OWNER
ARTICLE 4	CONTRACTOR
ARTICLE 5	SUBCONTRACTORS
ARTICLE 6	WORK BY OWNER OR BY SEPARATE CONTRACTORS
ARTICLE 7	MISCELLANEOUS PROVISIONS
ARTICLE 8	CONTRACT TIME
ARTICLE 9	PAYMENTS AND COMPLETION
ARTICLE 10	PROTECTION OF PERSONS AND PROPERTY
ARTICLE 11	INSURANCE FOR CONTRACTS
ARTICLE 12	CHANGES AND MODIFICATIONS IN THE WORK
ARTICLE 13	CLAIMS AND DISPUTE PROCEDURE
ARTICLE 14	UNCOVERING AND CORRECTION OF WORK
ARTICLE 15	TERMINATION OF THE CONTRACT

GENERAL CONDITIONS

ARTICLE 1 CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 CONTRACT AND CONTRACT DOCUMENTS:

The Contract Documents include the Construction Agreement and its attachments: the City's Invitation for Bid NO. 03036-BR dated January 2005 and any addenda, the Contractor's bid dated March 9, 2005, the Contract Plans and Specifications and any addenda. Any soils, geotechnical or other reports, surveys and analyses which may be made available to the Contractor for review or information under this Contract, are not adopted by reference into, nor are they part of the Contract Documents.

1.1.2 MODIFICATION:

A Modification is (1) a written Amendment to the Contract signed by both parties (City Manager for City of Lynchburg and authorized Agent for the Contractor), (2) a written Field Change Order signed by the Project Manager or Owners authorized representative and an Authorized Agent for the Contractor, (Field Change Orders are limited to no more than \$10,000 above the Contract amount originally authorized by the City Manager. Change Orders exceeding this limitation must have the specific approval of the City Manager or City Council.

1.1.3 WORK:

The term "Work" as used herein refers to work at the site of the project, is that normally done at the location of the project and includes all plant, labor, materials, supplies, equipment and other facilities and things necessary or proper for or incidental to the carrying out and completion of this contract. The term "Work" shall be construed to include material suitably stored and protected.

1.1.4 PROJECT:

The Project is the total construction of which the Work performed under Contract Documents may be the whole or a part.

1.1.5 FURNISH, INSTALL, PROVIDE:

The terms "Furnish" or "Install" or "Provide", unless specifically limited in context, mean: furnishing and incorporating a specified item, product or material in the work, including all necessary labor, materials, equipment to perform the work required, ready for use.

1.1.6 EXTRA WORK:

The term "Extra Work" as used herein, refers to and includes work required by the Owner, which, in the judgment of the Owner involves changes in or additions to that required by the drawings, specifications and addenda in their present form.

1.1.7 NOTICE OF AWARD:

The written notice of the acceptance of the Contractor's bid from the Owner to the Successful Bidder.

1.1.8 NOTICE:

The term "Notice" as used herein shall mean and include written notice. Written Notice shall be deemed to have been delivered to:

If to Owner:

Department of Public Works
2nd Floor, City Hall
900 Church Street
Lynchburg, Virginia 24504

Procurement Division
3rd Floor, City Hall
900 Church Street
Lynchburg, Virginia 24504

City Attorney
3rd Floor, City Hall
900 Church Street
Lynchburg, Virginia 24504

If to Contractor:

(Insert Successful bidder name and address)

Delivery shall be by special courier, recognized overnight delivery service, or United States mail. With the exception of original bid documents, facsimile copies and e-mail shall be acceptable if the original is received by special courier, recognized overnight delivery service, or United States mail within three business days.

1.1.9 MISCELLANEOUS WORDS OR TERMS:

Whenever they refer to the work or its performance, "directed", "required", "permitted", "ordered", "designated", "prescribed", and words of like import shall imply the direction, requirements, permission, order, designation or prescription of the Owner and "approved", "acceptable", "satisfactory", "in the judgment of" and words of like import shall mean approved by or acceptable to or satisfactory to or in the judgment of the Owner.

1.2 EXECUTION, CORRELATION AND INTENT OF CONTRACT DOCUMENTS

1.2.1 Two originals of the Construction Agreement, shall be executed.

1.2.2 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

1.2.3 Anything shown on the drawings and not mentioned in the specifications or mentioned in the specifications and not shown on the drawings shall have the same effect as if shown or mentioned respectively in both. Technical specifications take priority over general specifications and detail drawings take precedence over general drawings. Any conflict or inconsistency in the drawings shall be submitted by the Contractor to the A/E, with a copy to the Owner. The A/E's decision thereon shall be final. In case of conflict or inconsistency between the drawings and the specifications, the specifications shall govern.

1.2.4 Should any labor or material be required which is not denoted in the drawings and specifications, but which is, nevertheless, reasonably necessary for the proper carrying out of the intent of the

Work, it is agreed that the labor or material is implied and the Contractor shall provide such labor and furnish such materials as fully as if they were completely delineated and prescribed without additional cost to the Owner.

- 1.2.5 The Contractor may be furnished additional instructions and detail drawings to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as a part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions.
- 1.2.6 The drawings and specifications are divided into sections for convenience and clarity only. The Contractor shall not construe this as a division of the work into various subcontractor units. The Contractor may subcontract the Work in such divisions as he sees fit, but he is ultimately responsible for furnishing all work shown on the drawings and in the specifications.
- 1.2.7 The provisions of this Contract cannot be amended, modified, varied or waived in any respect except by a Modification. **The Contractor is hereby given notice that no person has authority to orally waive, or to release the Contractor from any of the Contractor's duties or obligations under or arising out of this Contract.** Any waiver, approval or consent granted by Modification to the Contractor shall be limited to those matters specifically and expressly stated thereby to be waived, approved or consented to and shall not relieve the Contractor of the obligation to obtain any future waiver, approval or consent.

1.3 OWNERSHIP AND USE OF DOCUMENTS

- 1.3.1 All Drawings, Specifications, and memoranda relating to the Work are the property of the Owner and are to be used only for the Project.

ARTICLE 2 ARCHITECT/ENGINEER

2.1 DEFINITIONS

- 2.1.1 The term Architect/Engineer, hereinafter "A/E" or "Architect" or "Engineer", shall mean the consulting firm or City Department/Division, or their duly authorized representatives, lawfully licensed to practice in Virginia, that is responsible for designing or engineering the work, and performing the activities specified herein.
- 2.1.2 The A/E is referred to throughout the Contract Documents as if singular in number and masculine in gender. The A/E is further described as one of the following:

2.2 ARCHITECT/ENGINEER STATUS

- 2.2.1 The A/E will provide services as described in these General Conditions.
- 2.2.2 The A/E will advise and consult with the Owner. The Owner's instructions to the Contractor may be forwarded through the A/E. The A/E will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise changed by Modification.

- 2.2.3 The A/E may visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. The Contractor may not rely on the A/E to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.
- 2.2.4 The A/E will immediately inform the Owner and Contractor whenever in the reasonable opinion of the A/E any of the Work is proceeding contrary to the requirements of the Contract Documents and will be unacceptable. Such notification by the A/E will not be a cause for the Contractor to claim either delay of the Work or any increase in the Contract Sum.
- 2.2.5 The A/E, the Owner and other governmental representatives shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so that the A/E, the Owner and other governmental representatives may perform their functions under the Contract Documents.
- 2.2.6 Where applicable, based on the A/E's observations and an evaluation of the Contractor's Applications for Payment, the A/E will recommend the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in Article 9 Payments and Completion.
- 2.2.7 The A/E will be an interpreter of the requirements of the plans, drawings, and specifications. The A/E will render interpretations necessary for the proper execution and progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon. Either party to the Contract may make written request to the A/E for such interpretations. All interpretations of the A/E shall be consistent with the intent of and reasonably inferable from the plans, drawings, and specifications and will be in writing and/or in the form of drawings.
- 2.2.8 The A/E will recommend to the Owner the rejection of work that does not conform to the plans, drawings, and specifications. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the work in accordance with Subparagraph 7.6.2 whether or not such Work be then fabricated, installed or completed.
- 2.2.9 The A/E will review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data, Samples and Manuals, but only for conformance with the design concept of the Work and with the information given in the plans, drawings, and specifications. The A/E approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- 2.2.10 The A/E's acceptance of materials or products on behalf of the Owner shall not bar future rejection of such items if they are subsequently found to be defective or inferior in quality or uniformity to the materials or products specified by the Contract, or if such items are not as represented by the Contractor.
- 2.2.11 As required, the A/E will conduct inspections to assist the Owner in determining the dates of Substantial Completion and Final Completion, will receive and forward to the Owner for the Owner's review written warranties and related documents required by the Contract and assembled by the Contractor, and will recommend final Certificate for Payment upon compliance with the requirements of Article 9 Payment and Completion.

- 2.2.12 All claims, disputes, or other matters or questions between the Contractor and Owner arising out of or relating to the A/E's interpretation of the Contract Documents or any other decisions, communications, or actions of the A/E arising out of or relating to the performance of the Work shall be resolved as set forth in Article 12 Changes and Modifications in the Work.
- 2.2.13 In case of the termination of the employment of the A/E, the Owner shall appoint a new A/E, who shall have the same status under the Contract Documents as the former A/E.

ARTICLE 3 OWNER

3.1 DEFINITION

- 3.1.1 The Owner is the City of Lynchburg, Virginia and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or its authorized representative. The Director, Department of Public Works or his designee is the authorized Owners representative for this contract.
- 3.1.2 The Department of Public Works, City of Lynchburg will designate a single Owner's representative, with the title of Project Manager (PM), who will have the power to act, within the scope of his delegated authority, for and on behalf of the Owner, in accordance with the terms of the Contract.
- 3.1.3 For purposes of change in the work, the term "Owner" or "Owner's representative" specifically excludes any and all inspectors having building code or City ordinance responsibilities or jurisdiction under the requirements of the Building Permit.

3.2 INFORMATION POSSESSED BY OWNER

- 3.2.1 The Owner, as a courtesy, will make available for the Contractor's reasonable review, at the Owner's offices or together with the Contract Documents, certain boring logs, geotechnical, soils and other reports, surveys and analyses pertaining to the Contract site of which the Owner is aware and has in its possession. Any boring logs that are provided to the Contractor, are only intended to reflect conditions at the locations of the borings and do not necessarily reflect site conditions at other locations on the site. Any reports surveys and analyses provided by Owner are for the Contractor's information only, and their accuracy and completeness are not guaranteed or warranted by the Owner or the A/E, and such reports are not adopted by reference into, nor are they part of the Contract Documents.
- 3.2.1.1 Notwithstanding any factual statement, conclusion, or any language or recommendations contained in such reports, the Contractor assumes full responsibility for inspection of the site and for the means and methods of construction that he employs when performing the work. The Owner shall not be liable for any additional work or costs arising as a result of any conclusions reached or assumptions derived by the Contractor from or based upon any such geotechnical, soils and other reports, surveys and analyses which the Owner makes available for the Contractor's information and review.

3.3 OWNER-PAID PERMITS AND FEES

- 3.3.1 The Owner will, where applicable, pay for:
- .1 Sewer availability fees;
 - .2 Water availability/meter connection fee;
 - .3 Electrical, natural gas, telephone, and cable TV permanent installation charges;
 - .4 Any easements required;
 - .5 Railroad Flagging Services;
 - .6 Permits for work in Virginia Department of Transportation (VDOT) right-of-way. The Contractor is required to comply with the General Requirement for work in the VDOT right-of-way as outlined in the The Manual of Specifications and Standard Details, 2003 for the City of Lynchburg, and the VDOT Manual for this work. Upon completion of all work in the VDOT right-of-way, the VDOT Personnel will conduct an inspection and issue a punch list. The Contractor shall be responsible for completion of those items on the punch list and the written release of the Permit.
- 3.3.2 The Contractor's attention is directed to Article 4.7 Contractor-Paid Taxes, Permits, Fees, and Notices describing other permits to be obtained and fees to be paid by the Contractor.
- 3.3.3 The foregoing are in addition to other duties and responsibilities of the Owner enumerated elsewhere in the Contract Documents.

3.4 *OWNER'S RIGHT TO STOP WORK*

- 3.4.1 If the Contractor fails to correct defective Work as required herein or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner, by a written order, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

3.5 *OWNER'S RIGHT TO CARRY OUT THE WORK*

- 3.5.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven (7) days after receipt of written Notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy he may have, rectify such deficiencies as outlined in Section 6.1 Owner's Right to Perform Work and to Award Separate Contracts. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the A/E's additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.
- 3.5.2 Neither the Owner nor the A/E nor their officers, agents, assigns or employees are in any way liable or accountable to the Contractor or his surety for the method by which work performed by the Owner, or at the Owner's direction, or any portion thereof, is accomplished or for price paid

therefor. Notwithstanding the Owner's right to carry out a portion of the Work, maintenance and protection of the Work remains the Contractor's and Surety's responsibility as provided for in the Performance Bond and Guarantee of Contractor, pursuant, but not limited, to Articles 4 Contractor and 13 Uncovering and Correction of Work.

3.6 *SUSPENSION OF WORK*

3.6.1 The Owner shall have the authority to suspend the Work, in whole or in part, for such periods and such reasons as the Owner may deem necessary or desirable, in its sole discretion, including without limitation:

- .1 Unsuitable weather;
- .2 Other conditions considered unfavorable for the suitable prosecution of the Work; and/or
- .3 Other conditions considered adverse to the best interests of the Owner.

3.6.2 Any such suspension shall be in writing to the Contractor. The Contractor shall obey immediately such orders of the Owner and shall not resume the Work until so ordered in writing by the Owner. The Contractor shall be entitled to an extension of the Contract Time subject to the provisions of Article 8 Contract Time herein.

3.6.3 No such suspension of the Work shall be the basis of a claim by the Contractor for any increase in the Contract Sum or for any other damages, losses, costs or expenses whatsoever provided that the suspension is for a reasonable time, under the circumstances then existing and the cause thereof is beyond the control and is without the fault or negligence of the Owner.

3.6.4 In the event of suspension of Work, the Contractor will and will cause his subcontractors to protect carefully his and their materials and work against damage or injury from the weather and maintain completed and uncompleted portions of the work as required by the Contract Documents. If, in the opinion of the Owner any work or material shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors to so protect same, such work and materials shall be removed and replaced at the expense of the Contractor.

3.7 *USE AND OCCUPANCY PRIOR TO FINAL ACCEPTANCE BY OWNER*

3.7.1 The Owner has the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time for completing the entire Work or any portions thereof may, or may not, have expired. The taking of possession and use by the Owner shall be in accordance with the provisions regarding Substantial Completion in Article 9.8 Substantial Completion and Guarantee Bond. If such prior use delays the Work, the Contractor may submit a request for a time extension in accordance with the requirements of Article 8 Contract Time.

3.8 *RIGHT TO AUDIT AND PRESERVATION OF RECORDS*

3.8.1 The Contractor shall maintain books, records and accounts of all costs in accordance with generally accepted accounting principles and practices. The Owner or its authorized representative shall have the right to audit the books, records and accounts of the Contractor under any of the following conditions:

- .1 If the Contract is terminated for any reason in accordance with the provisions of these Contract Documents in order to arrive at equitable termination costs;
 - .2 In the event of a disagreement between the Contractor and the Owner on the amount due the Contractor under the terms of this Contract;
 - .3 To check or substantiate any amounts invoiced or paid which are required to reflect the costs of the Contractor, or the Contractor's efficiency or effectiveness under this Contract or in connection with extras, changes, claims, additions, backcharges, or other, as may be provided for in this Contract; and/or
 - .4 If it becomes necessary to determine the Owner's rights and the Contractor's obligations under the Contract or to ascertain facts relative to any claim against the Contractor which may result in a charge against the Owner.
- 3.8.2 These provisions for an audit shall give the Owner unlimited access during normal working hours to the Contractor's books and records under the conditions stated above.
- 3.8.3 The Contractor shall make all his books, records, documents, and other evidence bearing on his costs and expenses under this Contract available to the Owner for a period of three years after final payment or termination hereunder
- 3.8.4 All payments under this Contract are subject to audit under the circumstances stated above. Audits may be performed at the Owner's option, either during the Contract time period or during the above record retention time period. Regardless of authorization, approval or acceptance, signatures or letters which are given by the Owner and are part of the Owner's control systems or are requested by the Contractor, the payments made under this Contract shall not constitute a waiver of the Owner's right to audit. Payments shall not constitute a waiver or agreement by the Owner that it accepts as correct the billings, invoices or other charges on which the payments are based. If the Owner's audit produces a claim against the Contractor, the Owner may pursue all its legal remedies even though it has made all or part of the payments required by this Contract.
- 3.8.5 If any audit by the Owner or the Owner's representative discloses an underpayment by the Owner, the Owner shall have the duty to pay any amounts found by the audit to be owed to the Contractor. If such audit discloses an overpayment, the Contractor shall have the obligation to reimburse the Owner for the amount of the overpayment.
- 3.8.6 The Owner's right to audit and the preservation of records shall terminate at the end of three (3) years as stated herein above. The Contractor shall include this "Right to Audit and Preservation of Records" clause in all subcontracts issued by him and he shall require same to be inserted by all lower tier Subcontractors in their subcontracts, for any portion of the work. Should Contractor fail to include this clause in any such Contract or lower tier Contract, or otherwise fail to insure the Owner's rights hereunder, Contractor shall be liable to Owner for all cost, expenses and attorney's fees which Owner may have to incur in order to obtain an audit or inspection of or the restoration of records which would have otherwise been available to Owner from said persons under this clause. Such audit may be conducted by the Owner or its authorized representative.

3.9 RIGHT TO REVIEW OTHER DOCUMENTS AND MATERIALS

- 3.9.1 In addition to the rights granted to the Owner under Article 3.8 Right to Audit and Preservation of Records, the Owner shall have the right to review and copy any and all of the Contractor's records pertaining to or relating in any way to this project, including, but not limited to, correspondence, memoranda, minutes, reports, intra- and inter-office communications, work papers, estimating sheets, progress reports, forecasts, audio or video recordings, computer disks, films, or any other materials, regardless of physical form or characteristics, which were prepared by or in the possession of, or obtainable by, the Contractor. The Contractor shall make all such documents and records available to the Owner upon ten (10) days written Notice to the Contractor of the Owner's intent to review such documents. The Contractor shall include this "Right to Review Documents and Other Materials" clause in all subcontracts issued by him and he shall require same to be inserted by all lower-tier subcontractors in their subcontracts for any portion of the Work. The Contractor hereby waives any right he may have to additional compensation or time extensions in the event he fails or refuses to produce records pertaining to any such claim as requested by the Owner pursuant to this paragraph. In addition, the Owner may withhold all or any portion of any progress payments, which may be otherwise due, in the event Contractor refuses to comply with its obligations under this paragraph. The review of documents and other records under this clause may be conducted by the Owner or its authorized representatives.

ARTICLE 4 CONTRACTOR

4.1 DEFINITION

- 4.1.1 The Contractor is the person or entity identified in the Construction Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.
- 4.1.2 This entire Contract is not one of agency by the Contractor for Owner but one in which the Contractor is engaged independently in the business of providing the services and performing the Work herein described as an independent Contractor.

4.2 REVIEW OF CONTRACT DOCUMENTS

- 4.2.1 The Contractor shall not perform any portion of the Work at any time without having obtained the Contract Documents or, where required, approved Shop Drawings, Product Data, Samples or Manuals for such portion of the Work
- 4.2.2 The Contractor and his Subcontractors shall keep at the site of the Work at least two (2) copies of the drawings and specifications and shall at all times give the A/E, inspectors, as well as representatives of the Owner access thereto. Further, said drawings shall be the approved sets issued to the Contractor by the appropriate City Permit agencies

4.3 CONTRACTOR'S REPRESENTATIONS

By entering into this Contract with the Owner, the Contractor represents and warrants the following, together with all other representations and warranties in the Contract Documents

- 4.3.1 That he is experienced in and competent to perform the type of work required and to furnish the plant, materials, supplies or equipment to be so performed or furnished by him;
- 4.3.2 That he is financially solvent, able to pay his debts as they mature, and possessed of sufficient working capital to initiate and complete the Work required under the Contract;

- 4.3.3 That he is familiar with all Federal, State, and Local Government laws, ordinances, permits, regulations and resolutions which may in any way affect the Work or those employed therein;
- 4.3.4 That such temporary and permanent work required by the Contract Documents which is to be done by him will be satisfactorily constructed and fit for use for its intended purpose and that such construction will not injure any person, or damage any property;
- 4.3.5 That he has carefully examined the Contract Documents and the site of the Work and that from his own investigations, he has satisfied himself and made himself familiar with: (1) the nature and location of the Work, (2) the character, quality and quantity of materials likely to be encountered, including, but not limited to, all structures and obstructions on or at the project site, both natural and man-made; (3) the character of equipment and other facilities needed for the performance of the Work, (4) the general and local conditions including without limitation its climatic conditions, the availability and cost of labor and the availability and cost of materials, tools and equipment; (5) the quality and quantity of all materials, supplies, tools, equipment, labor and professional services necessary to complete the Work in the manner required by the Contract Documents; and (6) all other matters or things which could in any manner affect the performance of the Work;
- 4.3.6 That he will fully comply with all requirements of the Contract Documents;
- 4.3.7 That he will perform the Work consistent with good workmanship, sound business practice, and in the most expeditious and economical manner consistent with the best interests of the Owner;
- 4.3.8 That he will furnish efficient business administration, an experienced superintendent, and an adequate supply of workmen, equipment, tools and materials at all times;
- 4.3.9 That he will complete the Work within the Contract Time;
- 4.3.10 That his Contract price is based upon the materials, systems and equipment required by the Contract Documents, without exception; and
- 4.3.11 That he has satisfied himself as to the feasibility and correctness of the Contract Documents for the construction of the Work.

4.4 SUPERVISION AND CONSTRUCTION PROCEDURES

- 4.4.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract; subject, however, to the Owner's right to reject means and methods proposed by the Contractor which are unsafe or otherwise not in compliance with the Contract Documents.
- 4.4.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and Sub-subcontractor's, suppliers, their agents and employees, and of other persons performing any of the Work and for their compliance with each and every requirement of the Contract Documents, in the same manner as if they were directly employed by the Contractor.
- 4.4.3 The Contractor understands and agrees that he shall not be relieved of his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the

Owner or the A/E in their administration of the Contract or by inspections, tests, or approvals required or performed under Article 7 by persons other than the Contractor.

- 4.4.4 Before starting a section of work, the Contractor shall carefully examine all preparatory work that has been executed by others to receive his Work to see that it has been completed. He shall check carefully, by whatever means are required, to ensure that his Work and adjacent, related work will finish to proper quality, contours, planes, and levels.
- 4.4.5 The Contractor understands and agrees that the Owner and A/E will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and they will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Owner and the A/E will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.
- 4.4.6 The Contractor shall employ no plant, equipment, materials, or persons for this Work to which the Owner objects.
- 4.4.7 The Contractor shall not remove any portion of the Work or stored materials from the site of the Work.

4.5 *LABOR, MATERIALS AND EQUIPMENT*

- 4.5.1 The Contractor shall furnish all plant, labor, materials, supplies, equipment and other facilities and things necessary or proper for or incidental to the Work, and will perform all other obligations imposed on him by this Contract. Final payment will not be made until the Work is so completed.
- 4.5.2 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- 4.5.3 Work and materials which are necessary in the construction but which are not specifically referred to in the specifications or shown in the drawings but implied by the Contract shall be furnished by the Contractor at his own cost and expense. Such work and materials shall correspond with the general character of the Work as may be determined by the A/E subject to review as provided in Article 2.2.11.
- 4.5.4 The Contractor shall perform at least that percentage of the Work specified in the Construction Agreement, with forces that are in the direct employment of the Contractor's organization. The Contractor shall submit to the Owner within thirty (30) calendar days after award of the Contract for the Work, a designation of the Work to be performed by the Contractor with his own forces. The percentage of the Work to be performed under subcontract shall be calculated by adding the amounts of all subcontracts and dividing this sum by the total amount of the Contract.

- 4.5.5 The Contractor shall at all times enforce strict discipline, safety and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

If any person employed on the Work by the Contractor shall appear to the Owner to be incompetent or to act in a disorderly or improper manner, such person shall be removed immediately at the request of the Owner, and shall not be reemployed except on written consent of the Owner.

- 4.5.6 No materials or supplies for the Work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage, or under a conditional sale or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the Work.
- 4.5.7 The Contractor shall provide approved and adequate sanitary accommodations. All wastes shall be covered, disinfected, incinerated or otherwise disposed of legally.
- 4.5.8 All equipment, apparatus and/or devices of any kind to be incorporated into the Work that are shown or indicated on the drawings or called for in the specifications or required for the completion of the Work shall be entirely satisfactory to the Owner as regards operations, capacity and/or performance. No approval, either written or verbal, of any drawings, descriptive data or samples of such equipment, apparatus, and/or device shall relieve the Contractor of his responsibility to turn over the same in good working order for its intended purpose at the completion of the Work in complete accordance with the Contract Documents. Any equipment, apparatus and/or device not fulfilling these requirements shall be removed and replaced by proper and acceptable equipment, etc., or put in good working order satisfactory to the Owner without additional cost to the Owner.

4.6 WARRANTY

- 4.6.1 The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all workmanship will be of first class quality, free from faults and defects and in conformance with the Contract Documents and all other warranties and guaranties specified therein. Where no standard is specified for such workmanship or materials, they shall be the best of their respective kinds. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.

If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty is not limited by the provisions of Article 13, Uncovering and Correction of Work.

- 4.6.2 The Work included in this Contract is heretofore specified. The Contractor shall be required to complete the Work specified and to provide all items needed for construction of the project, complete and in good order.

4.7 CONTRACTOR-PAID TAXES, PERMITS, FEES AND NOTICES

- 4.7.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted at the time bids are received,

whether or not yet effective. Taxes to be paid by the Contractor shall include, but shall not be limited to, the Lynchburg City Business, Professional and Occupational License Tax (a gross receipts tax).

- 4.7.2 Except as provided in Article 3.3 Owner-Paid Permits and Fees the Contractor will be responsible for obtaining and paying for all other fees, permits and licenses necessary for the proper execution of the work, including but not limited to:

- .1 Building Permit and inspections (City fees waived);
- .2 Plumbing, Electrical, Mechanical Permits and inspections (City fees waived);
- .3 Temporary water meter, temporary electrical and C&P installations and temporary utility usage;
- .4 Temporary security lighting;
- .5 All other permits necessary in order to perform the Work shall be secured by the Contractor and fees necessary in order to perform the Work shall be paid by him as part of this Contract at no additional cost to the Owner.

- 4.7.3 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, permits, resolutions and lawful orders of any public authority bearing on the performance of the Work; including but not limited to OSHA, Title 40.1 Labor and Employment Chapter 3 of the Code of Virginia, and Title VII of the Civil Rights Act of 1964, as amended. All safety violations shall be corrected immediately upon receipt of notice of violation.

4.8 COMPLIANCE

- 4.8.1 All demolition and excavation shall comply with the rules and regulations for the prevention of accidents as issued by the Department of Labor and Industry of the Commonwealth of Virginia.

- 4.8.2 To the extent of the work indicated in the Contract Documents, the Contractor shall comply and the construction shall conform with all applicable and current editions or revisions of the following codes, specifications and standards. In case of conflict, the order of precedence shall be as hereinafter listed:

- .1 Contract Documents;
- .2 Lynchburg City Purchasing Ordinance, as amended;
- .3 The Virginia Uniform Statewide Building Code, as amended (BOCA and NEC);
- .4 The Virginia Department of Transportation Road and Bridge Specifications and the Road Designs and Standards.

- 4.8.3 If the Contractor (or any person in contract with the Contractor relating to the subject project) finds an error, inconsistency, omission, ambiguity, discrepancy, conflict or variance in the Contract Documents, or between the Contract Documents and any of the codes, specifications and standards set forth in 4.8.2 herein, the Contractor has the obligation to seek a clarification thereof from the A/E, with a copy to the Owner, prior to the time the Work is performed which is affected by such error, inconsistency, omission, ambiguity, discrepancy, conflict or variance. The

Owner will welcome such a clarification request and, if deemed necessary by the Owner, the Owner will issue a written instruction clarifying the matter in question. If the Contractor feels that the written clarification requires additional Work, the Contractor shall follow the change process in Article 12 Changes and Modifications in the Work.

Should the Contractor fail to seek such a clarification thereof immediately upon the discovery of the need therefor, prior to the time the said Work is performed, the Contractor thereby assumes all risk of loss related to such error, inconsistency, ambiguity, discrepancy, conflict or variance which the Contractor (and any person in contract with Contractor relating to the subject project) knew or should have known, using a normal, professional standard of care, existed prior to the time the Work was performed.

- 4.8.4 Any material or operation specified by reference to publications, published specifications of a Manufacturer, a Society, an Association, a Code, or other published Standard, shall comply with the requirements of the referenced document which is current on the date of receipt of bids. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the A/E in writing, with a copy to the Owner. The A/E will make such judgements as are necessary and notify the Contractor prior to the performance of the work.
- 4.8.5 If the Contractor performs any Work contrary to such laws, ordinances, permits, rules, regulations and resolutions, he shall assume full responsibility therefor and shall bear all costs attributable thereto.
- 4.8.6 The Contractor will be held responsible for locating all underground structures such as water, oil and gas mains, water and gas services, storm and sanitary sewers and telephone and electric conduits which may be encountered during the construction operation. The Contractor shall have Miss Utility locate all utilities on the site which are within the area of the work and shall dig test holes to determine the position of the underground structures. The Contractor shall pay the cost of digging test holes and likewise he shall pay the cost of the services of the representatives of the owners of such utilities for locating the said utilities. The cost of determining the location of any and all utilities is to be included in the bid price. The Owner shall pay the owners of such utilities for fees or charges for relocation of gas, electric, telephone, cable or other lines and/or services indicated to be relocated by others.
- 4.8.7 If utilities are marked which are not shown on the plans, the Contractor shall immediately notify the Owner and the A/E of such finding. The Owner and A/E shall provide a direction to the Contractor within a reasonable period of time if additional work is required as a result of the finding.. If the Contractor believes that it requires additional Work, the Contractor shall follow the change process in Article 12 Changes and Modifications in the Work.

4.9 *ALLOWANCES*

- 4.9.1 The Special Conditions will contain provisions for allowances, if such is applicable to this Contract. (NA)

4.10 *SUPERINTENDENT*

- 4.10.1 The Contractor shall employ a competent Superintendent and any necessary assistants to ensure supervisory attendance at the Project site during the progress of the Work. The Superintendent

shall have full authority to represent the Contractor and all communications given to the Superintendent shall be as binding as if given to the Contractor.

- 4.10.2 It is understood that such Superintendent shall be acceptable to the Owner and shall be one who will be continued in that capacity for duration of this project, unless he ceases to be on the Contractor's payroll. The Superintendent shall not be employed on any other project during the performance of this Contract.

4.11 CONSTRUCTION SCHEDULE

- 4.11.1 The Contractor shall within twenty (20) days after issuance of the Notice of Award, prepare and submit to the A/E and Owner for review, a reasonably practicable and feasible Construction Schedule and provide to Owners A/E with copy to the Owner, showing the method by which the Contractor will comply with Completion date requirements as set forth in the Construction Agreement. The schedule shall show in detail how the Contractor plans to execute and coordinate the Work. The Contractor shall use this schedule in the planning, scheduling, direction, coordination and execution of the Work. The Construction Schedule shall encompass all of the work of all trades necessary for construction of the project and shall be sufficiently complete and comprehensive to enable progress to be monitored on a day-to-day basis. The Owner and A/E shall each be provided with a copy of all schedules, updates reports and other documentation required herein which shall be suitable for reproduction by the Owner.
- 4.11.2 It is the sole responsibility of the Contractor to prepare, maintain, update, revise and utilize the Construction Schedule as outlined in 4.11 Construction Schedule. The schedule shall be the sole overall Construction Schedule utilized by the Contractor in managing this project, provided, however, that Contractor may at its option employ and utilize other schedules based upon and consistent with the Construction Schedule. In general, it is the intent of this Paragraph to allow the Contractor to choose its own means, methods and construction procedures consistent with good practice and the Contract Documents.
- 4.11.3 If the Contractor should submit a schedule or express an intention to complete the Work earlier than any required Milestone or Completion date, the Owner shall not be liable to the Contractor for any costs or delay should the Contractor be unable to complete the Work before such earlier Milestone or Completion date. The duties, obligations and warranties of the Owner to the Contractor shall be consistent with and applicable only to the completion of the Work on the Milestone and completion dates required in the Construction Agreement.
- 4.11.4 Submission to the Owner of the Construction Schedule is advisory only and shall not relieve the Contractor of the responsibility for accomplishing the Work within each and every required Milestone and Completion date. Omissions and errors in the approved Construction Schedule shall not excuse performance that is not in compliance with the Contract. Submission to the Owner in no way makes the Owner an insurer of the Construction Schedule's success or liable for time or cost overruns flowing from its shortcomings. The Owner hereby disclaims any obligation or liability by reason of Owner approval or failure to object to the Construction Schedule.
- 4.11.5 Contractor shall consult with and obtain information from principal Subcontractors necessary in preparation of the schedules, updates and revisions required herein. Contractor shall provide each principal Subcontractor with copies of the Construction Schedule and any revisions or updates affecting a Subcontractor's work. Contractor shall hold appropriate progress meetings with Subcontractors and shall direct and coordinate the work of Subcontractors consistent with and as

required herein. Owner shall have the right to attend Subcontractor progress meetings but shall not be required to participate in such meetings or provide information to Subcontractors, except through the Contractor. Contractor shall keep up-to-date minutes of Subcontractor progress meetings and shall provide same to Owner. The Contractor shall ensure that each Subcontractor, Sub-subcontractor or supplier acknowledges and accepts the requirements of the Construction Schedule relating to their part of the Work.

- 4.11.6 If Contractor's Construction Schedule indicates that Owner or a separate Contractor is to perform an activity by a specific date, or within a certain duration, Owner or any separate Contractor shall not be bound to said date or duration unless Owner expressly and specifically agrees in writing to same; the Owner's overall review of the schedule does not constitute an agreement to specific dates or durations for activities of the Owner or any separate contractor.
- 4.11.7 The Contractor's Superintendent shall maintain at the job site, a current Construction Schedule, indicating actual monthly progress for those portions of the project on which work has been or is being performed.
- 4.11.8 If an extension or contraction of any Milestone or Completion Date is authorized by any Change Order, the Contractor shall revise his Construction Schedule, Milestone and Completion Dates accordingly.
- 4.11.9 If, in the opinion of the Owner, the Construction Schedule does not accurately reflect the actual progress and sequence of the Contractor's performance of the Work, the Contractor shall revise the Construction Schedule, upon the Owner's request, and submit a revised Construction Schedule that accurately represents the progress and sequence of the Contractor's performance of the Work.
- 4.11.10 Contractor shall submit to the Owner the name of any scheduling consultant that Contractor may select or retain. Contractor shall not utilize any particular scheduling consultant over the reasonable objection of the Owner to that consultant.
- 4.11.11 Contractor covenants and guarantees that Contractor will not:
 - .1 Misrepresent to Owner its planning and scheduling of the Work;
 - .2 Utilize schedules materially different from those made available to the Owner or any Subcontractors for the direction, execution and coordination of the Work, or which are not feasible or realistic;
 - .3 Prepare schedules, updates, revisions or reports which do not accurately reflect Contractor's actual intent or Contractor's reasonable and actual expectations as to:
 - (a) The sequences of activities,
 - (b) The duration of activities,
 - (c) The responsibility for activities,
 - (d) Resource availability,
 - (e) Labor availability or efficiency,

- (f) Expected weather conditions,
- (g) The value associated with the activity,
- (h) The percentage complete of any activity,
- (i) Completion of any item of work or activity,
- (j) Project completion,
- (k) Delays, slippages, or problems encountered or expected,
- (l) Subcontractor requests for time extension, or delay claims of subcontractors, and
- (m) If applicable, the float time available.

4.11.12 Contractor's failure to substantially comply with the foregoing covenant and guarantee of Paragraph 4.11.11 shall be a substantial and material breach of contract which will permit Owner to terminate Contractor for default, or withhold payments under the Contract Documents, and shall entitle Owner to the damages afforded for misrepresentation or fraud by these Contract Documents or applicable law.

4.11.13 Should Contractor fail to substantially comply with the provisions of the Contract Documents relating to scheduling and execution of the Work by the overall project schedule, Owner shall have the right, at its option, to retain the services of scheduling consultants or experts (including attorneys if necessary in the opinion of the Owner) to prepare schedules, reports, updates and revisions of the schedule in accordance with the Contract Documents and to review and analyze same, in order to allow Owner and A/E to evaluate the program of the Work by Contractor, to determine whether Contractor is substantially complying with the Contract Documents, and to direct such action of the part of the Contractor, as permitted by the Contract Documents, as required to ensure, under the Owner's schedule prepared hereunder, that Contractor will complete the Work within the Contract Time. All costs and expenses and fees incurred by Owner in preparing the schedule hereunder shall be charged to Contractor's account. If Contractor fails to substantially comply with the scheduling and execution of the work requirements of the Contract Documents, Contractor hereby agrees, in such instance, to comply with such Owner-prepared schedules, if any, or directions, and activity sequences and durations as Owner may reasonably require, without additional cost to the Owner (subject only to cost adjustments for such changes in the Work as Owner may direct), to ensure completion within the Contract Time.

4.11.14 The Construction Schedule shall be utilized by Owner, A/E and Contractor for submission, review and approval of monthly Payment Request. The schedule must be updated by Contractor monthly with each progress payment application and submitted to the Owner and A/E for review with the progress payment application. Owner shall not be required to process and review Contractor's Application for Payment if Contractor has failed or refused to provide the scheduling update information required herein.

4.11.15 The type of schedule to be utilized on this project, along with its particular elements, shall be as specified herein.

4.12 RESPONSIBILITY FOR COMPLETION

4.12.1 The Contractor shall furnish such manpower, materials, facilities and equipment and shall work such hours, including night shifts, overtime operations and Sundays and holidays, as may be necessary to ensure the performance of the Work within the Milestone and Completion dates specified in the Construction Agreement. If the Owner notifies the Contractor that it has become apparent that the Work will not be Completed within required Milestone or Completion dates, the Contractor agrees that it will assume full responsibility to take some or all of the following actions, at no additional cost to the Owner (except for circumstances beyond the Contractors' control), in order to ensure, in the opinion of the Owner, that the Contractor will comply with all Milestone and Completion date requirements:

- .1 Increase manpower, materials, crafts, equipment and facilities;
- .2 Increase the number of working hours per shift, shifts per working day, working days per week, or any combination of the foregoing; and
- .3 Reschedule activities to achieve maximum practical concurrency of accomplishment of activities.

Failure of the Owner to notify the Contractor of the apparent delay shall not relieve Contractor of the obligation to finish the project within the required Milestone or Completion date.

4.12.2 If the actions taken by the Contractor are not satisfactory, the Owner may direct the Contractor to take any and all actions necessary to ensure completion within the required Milestone and Completion dates, without additional cost to the Owner (except for circumstances beyond the Contractor's control) . In such event, the Contractor shall continue to assume responsibility for his performance and for completion within the required dates.

4.12.3 If, in the opinion of the Owner, the actions taken by the Contractor pursuant to this Article or the progress or sequence of Work are not accurately reflected on the Construction Schedule, the Contractor shall revise such schedule to accurately reflect the actual progress and sequence of Work.

4.12.4 Failure of the Contractor to substantially comply with the requirements of this Article is grounds for a determination by the Owner, pursuant to Article 14 TERMINATION OF THE CONTRACT, that the Contractor is failing to prosecute the Work with such diligence as will ensure its completion within the time specified.

4.12.5 The Owner may, at its sole discretion and for any reason, including when it is apparent to the A/E or Owner that the Work will be completed within the required Milestone or Completion dates, require the Contractor to accelerate the Schedule of Performance by providing overtime, Saturday, Sunday and/or holiday work and/or by having all or any Subcontractors designated by the Owner provide overtime, Saturday, Sunday, and/or holiday work. In the event that the Owner requires overtime, Saturday, Sunday or holiday work by the Contractor's or his Subcontractor's own forces, and such requirement is not related in any way to the Contractor's apparent inability to comply with Milestone and Completion date requirements, the Owner shall reimburse the Contractor for the direct cost to the Contractor of the premium time for all labor utilized by the Contractor in such overtime, Saturday, Sunday or holiday work (but not for the straight time costs of such labor), together with any Social Security and State or Federal unemployment insurance

taxes in connection with such premium time. However, no overhead supervision costs, commissions, profit or other costs and expenses shall be payable in connection therewith.

- 4.12.6 This provision does not eliminate the Contractor's responsibility to comply with the City's noise ordinances, all VDOT permit requirements and all other applicable laws, regulations, rules, ordinances, resolutions, and permit requirements.

4.13 DOCUMENTS AND SAMPLES AT THE SITE

- 4.13.1 The Contractor shall, at the Owner's direction, maintain at the site for the Owner one record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record all changes made during construction, and approved Shop Drawings, Product Data, Samples and Manuals. These shall be available to the A/E. These shall be delivered to the Owner upon completion of the Work.

4.14 SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND MANUALS

- 4.14.1 SHOP DRAWINGS are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- 4.14.2 PRODUCT DATA are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.
- 4.14.3 SAMPLES are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- 4.14.4 MANUALS are manufacturer's installation, start-up, operating, maintenance and repair instructions, together with parts lists, pictures, sketches and diagrams that set forth the manufacturer's requirements, for the benefit of the Contractor and the Owner.
- 4.14.5 The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the Work of the Owner or any separate contractor, all Shop Drawings, Product Data, Samples and Manuals required by the Contract Documents.
- 4.14.6 By approving and submitting Shop Drawings, Product Data, Samples and Manuals, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

Parts and details not fully indicated on the contract drawings shall be detailed by the Contractor in accordance with standard engineering practice. Dimensions on the contract drawings, as well as detailed drawings themselves are subject in every case to measurements of existing, adjacent, incorporated and completed work, which shall be taken by the Contractor before undertaking any work dependent on such data.

4.14.7 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Owner or A/E's approval of Shop Drawings, Product Data, Samples or Manuals under Article 2 Architect/Engineer unless the Contractor has specifically informed the Owner and A/E in writing of such deviation at the time of submission and the Owner has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data, Samples or Manuals by the A/E's approval thereof.

4.14.8 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Owner or A/E on previous submittals.

No portion of the Work requiring submission of Shop Drawings, Product Data, or Samples shall commence until the submittal has been approved by the Owner and A/E as provided in Article 2 Architect/Engineer. All such portions of the Work shall be in accordance with approved submittals.

4.14.9 For substances that are proposed for use in the project that may be hazardous to human health, the Contractor shall submit to the A/E, for information only, information on precautions for safely using these substances, including certification of registration by the Contractor with authorities under the respective Virginia and Federal Toxic Substances Control Acts.

4.14.10 Unless otherwise modified by the Owner in writing, the Contractor shall label or stamp and number all Shop Drawings, Product Data, Samples or Manuals as prescribed by the project Manager.

4.14.11 The Contractor shall submit a copy of each submittal, including the transmittal sheet (for shop drawings, product data, samples or manuals) to the Owner simultaneously with the Contractor's submission of said drawings, data, samples or manual packages to the A/E.

4.15 *EQUAL PRODUCTS:*

4.15.1 The term "Product" as used herein refers to materials, equipment, supplies, articles, fixtures, devices, types of construction, or products, as appropriate.

4.15.2 All products furnished shall, whenever specified and otherwise wherever practicable, be the standard products of recognized, reputable manufacturers. If the manufacturer cannot make scheduled delivery of an approved item, the Contractor may request approval of the Owner to use another brand, make, manufacturer, article, device, product, material, fixture, form or type of construction which the Contractor judges to be equal to that specified. An item shall not be considered by the Owner for approval as equal to the item so named or described unless it (1) it is at least equal in quality, durability, appearance, strength, and design; (2) it will perform at least equally the specific function imposed by the general design for the work being contracted for or the material being purchased; and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the specifications. Approval shall be at the sole discretion of the Owner and will be based upon considerations of quality, workmanship, economy of operation, suitability for the purpose intended, and acceptability for use on the project. Any such approval must be in writing to be effective and the decision of the Owner shall be final.

4.15.4 To obtain such approval of equal products other than those specified in Contract Documents, and not previously approved during the bidding, the Contractor's request for approval of any equal product shall include the following:

- .1 Complete data substantiating compliance of the proposed equal product with the Contract Documents;
- .2 Accurate cost data on proposed equal product in comparison with product or method specified;
- .3 Product identification including manufacturer's name, address, and phone number;
- .4 Manufacturer's literature showing complete product description, performance and test data, and all reference standards;
- .5 Samples and colors in the case of articles or products;
- .6 Name and address of similar projects on which the product was used and date of installation;
- .7 All directions, specifications, and recommendations by manufacturers for installation, handling, storing, adjustment, and operation.

4.15.5 The Contractor shall also submit with his request for approval a statement which shall include all of the following representations by the Contractor, namely that:

- .1 He has investigated the proposed equal product and determined that it is equal or better in all respects to that specified and that it fully complies with all requirements of the Contract Documents;
- .2 He will meet all contract obligations with regard to this substitution;
- .3 He will coordinate installation of accepted equal products into the work, making all such changes and any required schedule adjustments, at no additional cost to the Owner, as may be required for the Work to be complete in all respects;
- .4 He waives all claims for additional costs and additional time related to equal products. He also agrees to hold the Owner harmless from claims for extra costs and time incurred by Subcontractors and suppliers, or additional services which may have to be performed by the A/E, for changes or extra work that may, at some later date, be determined to be necessary in order for the Work to function in the manner intended in the Contract Documents;
- .5 He will provide the same warranty and guarantee, and perform any work required in accordance therewith, for the equal product that is applicable to the specified item for which the equal product is requested;
- .6 Material will be installed, handled, stored, adjusted, tested, and operated in accordance with the manufacturers' recommendation and as specified in the Contract Documents;
- .7 In all cases new materials will be used unless this provision is waived by Notice from the Owner or unless otherwise specified in the Contract Documents;

- .8 All material and workmanship will be in every respect, in accordance with that which in the opinion of the Owner, is in conformity with approved modern practice; and
 - .9 He has provided accurate cost data on the proposed equal product in comparison with the product or method specified, if applicable.
- 4.15.6 The Owner may require tests of all products proposed as equal products so submitted to establish quality standards, at the Contractor's expense. After approval of an equal product, if it is determined that the Contractor submitted defective information or data regarding the equal product upon which Owner's approval was based, and that unexpected or unanticipated redesign or rework of the project will be required in order to accommodate the equal product, or that the item will not perform or function as well as the specified item for which equal product was requested, the Contractor will be required to furnish the original specified item or request approval to use another equal product. The Contractor shall pay all costs, expenses or damages associated with or related to the unacceptability of such an equal product and the resultant utilization of another item and no time extension shall be granted for any delays associated with or related to such an equal product.
- 4.15.7 Equal products will not be considered for approval by the Owner if:
- .1 The proposed equal product is indicated or implied on the Contractor's shop drawing or product data submittals and has not been formally submitted for approval by the Contractor in accordance with the above-stated requirements; or
 - .2 Acceptance of the proposed equal product will require substantial design revisions to the Contract Documents or is otherwise not acceptable to the Owner.
- 4.15.8 Except as otherwise provided for by the provisions of any applicable laws, the Contractor shall not have any right of appeal from the decision of the Owner disapproving any products submitted if the Contractor fails to obtain the approval for an equal product under this Article.
- 4.15.8 If the Contractor proposes a product which the Owner determines is not equal to the product named in Contract Documents but which the Owner nevertheless is willing to accept, Contractor shall provide upon request by the Owner an itemized comparison of the proposed substitution with the product specified and the cost differential which shall be credited to the Owner in a Change Order issued in accordance with Article 12 Changes and Modifications in the Work.

4.16 USE OF SITE

- 4.16.1 The Contractor shall confine his operations at the site to areas permitted by law, ordinances, permits, easements, right-of-way agreements and the Contract Documents. The Contractor shall not unreasonably encumber the site, in the opinion of the Owner, with any materials, equipment or trailers nor shall he block the entrances or otherwise prevent reasonable access to the site, other working and parking areas, completed portions of the Work and/or properties, storage areas, areas of other facilities that are adjacent to the worksite. If the Contractor fails or refuses to move said material, equipment or trailers within 24 hours of Notice by the Owner to so do, the Owner shall have the right, without further Notice, to remove, at the Contractor's expense, any material, equipment and/or trailers which the Owner deems are in violation of this paragraph.

4.17 CUTTING AND PATCHING OF WORK

- 4.17.1 The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work and to make its several parts fit properly and in accordance with the Contract Documents.
- 4.17.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and of such separate contractor. The Contractor shall not unreasonably withhold from the Owner or any separate contractor his consent to cutting or otherwise altering the Work. The Owner shall not be required to accept Work with a cut, splice, or patch when such cut, splice or patch is not generally accepted practice for the particular work involved or is otherwise unworkmanlike in the opinion of the Owner.

4.18 RIGHT TO PUBLISH

- 4.18.1 The Contractor agrees that he will not publish, cause to be published, or otherwise disseminate any information of whatever nature relating to the Work being performed under this Contract, except as may be approved by the Owner in writing.

4.19 SITE CLEAN UP

- 4.19.1 The Contractor at all times shall keep the Project site and adjacent areas free from accumulation of waste materials or rubbish caused by his operations. Before final payment is made, the Contractor shall remove all of his waste materials, rubbish, scrap materials, debris, tools, construction equipment, machinery, surplus materials, falsework, temporary structures, including foundations thereof and plant of any description, from the Project site and put the site in a neat, orderly condition.
- 4.19.2 If the Contractor fails to clean up as required herein at any time during the performance of the Work or at the completion of the Work, the Owner may, upon 24 hours notification, clean up the site at the Contractor's expense.

4.20 PATENTS, ROYALTIES, ETC.

- 4.20.1 The Contractor guarantees to save harmless the Owner, its officers, agents, servants and employees from liability of any kind or nature, including cost, expense and attorney's fees on account of suits and claims of any kind for violation or infringement of any patents or patent rights by the Contractor, or by anyone directly or indirectly employed by him, or by reason of the use of any art, process, method, machine, manufacture, or composition of matter patented or unpatented in the performance of this Contract in violation or infringement of any letter or rights. The Contractor agrees to pay all royalties, fees, licenses, etc. required in respect of the work or any part thereof as part of his obligations hereunder without any additional compensation.

4.21 INDEMNIFICATION

- 4.21.1 It is hereby mutually covenanted and agreed that the relation of the Contractor to the work to be performed by him under this Contract shall be that of an independent contractor and that as such he will be responsible for all damages, loss or injury, including death, to persons or property that

may arise or be incurred in or during the conduct and progress of said work as the result of any action, omission or operation under the Contract or in connection with the Work, whether such action, omission or operation is attributable to the Contractor, Subcontractor, any material supplier, or anyone directly or indirectly employed by any of them. The Contractor shall make good any damages that may occur in consequence of the Work or any part of it. The Contractor shall assume all liability, loss and responsibility of whatsoever nature by reason of his neglect or violation of any Federal, State, County or local laws, regulations or ordinances.

- 4.21.2 The Contractor shall indemnify, hold harmless and defend the Owner, its employees, agents, servants and representatives from and against any and all claims, suits, demands, actions (regardless of the merits thereof) and damages of whatever nature arising out of or resulting from the performance of the Work or the failure to perform the Work, including jurisdictional labor disputes or other labor troubles that may occur during the performance of the Work.
- 4.21.3 The indemnification obligations under this Article shall not be affected in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under worker's or workman's compensation acts, disability benefit acts or other employee benefit acts.
- 4.21.4 The obligations of the Contractor under this Article 4.21 shall not extend to the actions or omissions of the A/E, his agents or employees, arising out of; (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the A/E, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage.
- 4.21.5 The obligations of the Contractor under this Article 4.21 shall not extend to the proportion of damages, loss or injury, including death, to persons or property that may arise or be incurred as the result of any action, omission or operation of the Owner, or Owner's Separate Contractor(s), and their employees, agents, servants, and/or representatives.

4.22 NON-DISCRIMINATION IN EMPLOYMENT

4.22.1 During the performance of this Contract, the Contractor agrees as follows:

- .1 The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age or disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause;
- .2 The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer;
- .3 Notices, advertisements and solicitations placed in accordance with Federal Law, rule or regulation, shall be deemed sufficient for the purpose of meeting the requirements of this provision; and

- .4 The Contractor will include the provisions of paragraphs .1, .2 and .3 above in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon every Subcontractor or vendor.

4.23 CONTRACT SECURITY

- 4.23.1 The Contractor shall deliver to the Owner, within ten (10) working days from Notice of Award, two (2) originals of a Performance Bond and a separate Labor and Material Payment Bond in a form acceptable to the Owner and each in an amount required by the Contract Documents as security for the faithful performance of the Contract, and the payment of all persons performing labor and furnishing materials in connection with this Contract. The City will not issue Notice to Proceed until the bonds are received. The amount of the Performance and Payment Bonds shall be increased to the same extent the Contract Sum is increased due to modifications. The form of bonds shall be acceptable to the Owner and the surety shall be such surety company or companies as are acceptable to the Owner and as are authorized to transact business in the Commonwealth of Virginia. The cost of such bonds shall be included in the Contractor's proposal amount.
- 4.23.3 The Contractor shall require that all sureties providing bonds for the Project will give written Notice to the Owner, at least thirty (30) days prior to the expiration or termination of the bond(s).
- 4.23.4 If, at any time, any surety or sureties becomes insolvent or is determined by the Owner to be unable to adequately secure the interest of the Owner, the Contractor shall within (30) days after Notice from the Owner to do so, substitute an acceptable bond(s) in such form and sum and signed by such other sureties as may be satisfactory to the Owner. The premiums on such bond(s) shall be paid by the Contractor.

ARTICLE 5 SUBCONTRACTORS

5.1 DEFINITIONS

- 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform or supply any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his Subcontractors.
- 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform or supply any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contractor Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.
- 5.1.3 The A/E will not deal directly with any Subcontractor or Sub-subcontractor or materials supplier. Subcontractor, Sub-subcontractors or material suppliers shall route requests for information or clarification through the Contractor to the A/E, with a copy to the Owner.

5.2 AWARD OF SUBCONTRACT AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- 5.2.1 The Contractor shall submit to the Owner with a copy to the A/E prior to the award of any subcontract for work under this contract and thirty (30) calendar days after the award of this

contract, the names of the suppliers of principal items, systems, materials, and equipment proposed for the Work; the names and addresses, business and emergency phones of the Subcontractors which he proposes to employ under this contract, as well as such other information as may be requested by the Owner. The Owner will review each Subcontractor and supplier based upon his apparent financial soundness and responsibility, his known or reported performance on previous similar work, and his available plant, equipment and personnel to perform the Work. The Contractor shall not employ a Subcontractor or supplier to whom the Owner reasonably objects. The Owner's objection to a proposed Subcontractor or supplier shall not affect the contract price.

- 5.2.2 The Contractor shall make no substitutions for any Subcontractor, person or entity previously selected unless first submitted to the City for review.

5.3 SUBCONTRACTUAL RELATIONS

- 5.3.1 By an appropriate written agreement the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents assumes toward the Owner and the A/E. Said agreement shall preserve and protect the rights of the Owner and the A/E under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractor's. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of all of the Contract Documents, and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to his Sub-subcontractor's. Each subcontract agreement shall insure that all appropriate provisions of the Contract Documents are complied with by the Subcontractor.
- 5.3.2 The provisions herein regarding the City's reasonable objection to any Subcontractor shall in no way affect the liability of the Contractor to Owner regarding performance of all obligations by or payment of Subcontractors. The City's failure to object to any given Subcontractor shall not relieve the Contractor of his obligation to perform or have performed to the full satisfaction of the Owner all of the work required by this Contract.
- 5.3.3 Neither this article nor any other provision of the contract documents shall be deemed to make the Owner a joint venturer or partner with the Contractor or to place the Subcontractor and materialmen in privity of contract with the Owner.

5.4 QUALIFICATION SUBMITTALS

- 5.4.1 Specific qualification submittals may be required of the Contractor, Subcontractors, installers and suppliers for certain critical items of the Work. Required qualification submittals are set forth in detail in the Instruction to Bidders and shall be provided, collected and submitted by the Contractor to the A/E with copies to the Owner. All information required of a single Subcontractor, installer or supplier shall be contained in a single, complete submittal. The

Contractor shall submit the required qualification information within ten (10) days after receipt of the Owner's request.

5.4.2 The Owner shall reject any proposed Subcontractor, installer or supplier, or any qualification submittals related thereto, for the following reasons:

- .1 The Contractor's failure to submit requested information within the specified time; or
- .2 The Contractor's failure to provide all of the requested information; or
- .3 The Contractor's submission of a Subcontractor, installer or supplier, or qualifications thereof, which are unacceptable in the judgment of the Owner.

5.4.3 Should the Owner have reasonable objection to any proposed Subcontractor, installer or supplier, the Contractor shall submit another firm for approval by the Owner at no additional cost to the Owner.

ARTICLE 6 WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site.

6.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the Contractor who executes each separate Construction Agreement.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford other contractors and the Owner reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work and shall properly connect and coordinate the Work with such other work. The Contractor shall coordinate his Work with the Owners and other contractors to store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the Work as will not unduly interfere with the progress of the Work or the work of any other contractors.

6.2.1.1 If the execution or result of any part of the Work depends upon any work of the Owner or of any separate contractor, the Contractor shall, prior to proceeding with the Work, inspect and promptly report to the Owner in writing any apparent discrepancies or defects in such work of the Owner or of any separate contractor that render it unsuitable for the proper execution or result of any part of the Work.

6.2.1.2 Failure of the Contractor to so inspect and report shall constitute an acceptance of the Owner's or separate contractor's work as fit and proper to receive the Work, except as to defects which may develop in the Owner's or separate contractor's work after completion of the Work and which the Contractor could not have discovered by its inspection prior to completion of the Work.

6.2.2 Should the Contractor cause damage to the work or property of the Owner or of any separate contractor on the Project, or to other work on the Site, or delay or interfere with the Owner's work

on ongoing operations or facilities or adjacent facilities or said separate contractor's work, the Contractor shall be liable for the same; and, in the case of another contractor, the Contractor shall attempt to settle said claim with such other contractor prior to such other contractor's institution of litigation or other proceedings against the Contractor.

If such separate contractor sues the Owner on account of any damage, delay or interference caused or alleged to have been so caused by the Contractor, the Owner shall notify the Contractor, who shall defend the Owner in such proceedings at the Contractor's expense. If any judgment or award is entered against the Owner, the Contractor shall satisfy the same and shall reimburse the Owner for all damages, expenses, and other costs that the Owner incurs as a result thereof.

- 6.2.3 Should Contractor have a dispute with a separate contractor with whom the Owner has contracted regarding damage to the Work or the property of Contractor or to the Work or property of said separate contractor or with regard to any delays or interferences which either Contractor or said separate contractor has caused to the performance of the other's Work, Contractor agrees to attempt to settle such dispute directly with said separate contractor. Contractor agrees that it will not seek to recover from the Owner any damages, costs, expenses (including, but not limited to, attorney's fees) or losses of profit incurred by the Contractor as a result of any damage to the Work or property of the Contractor or for any delay or interference caused or allegedly caused by any separate contractor.

6.3 OWNER'S RIGHT TO CLEAN UP

- 6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Article 4 Contractor, the Owner may clean up and charge the cost thereof to the Contractor responsible therefore as the Owner shall determine to be just.

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

The provisions of this contract shall be interpreted in accordance with the laws, ordinances, regulations, permits and resolutions of the Commonwealth of Virginia, The City of Lynchburg, and any applicable municipality.

7.2 PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein and if through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

7.3 SUCCESSORS AND ASSIGNS

The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any

monies due or to become due to him hereunder, without the previous written consent of the Owner and the Contractor's Surety.

In the event the Contractor desires to make an assignment of all or part of the Contract or any monies due or to become due hereunder, the Contractor shall file a copy of consent of surety, together with a copy of the assignment to the Owner and A/E. In the event the Contractor assigns all or any part of the monies due or to become due under this Contract, the instrument of assignment shall state that the right of assignees in and to any monies due to or to become due to Contractor shall be subject to prior liens and claims of all persons, firms and corporations that provided labor services or furnished material and equipment during the performance of the Work. The rights of assignees shall further be subject to the payment of any liens, claims, or amounts due to Federal, State, or Local governments.

7.4 *RIGHTS AND REMEDIES*

7.4.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law, not inconsistent with the Contract Documents. No time limitations described in this Contract shall be construed to alter the applicable statutory period of limitations with regard to the enforcement of the obligations of the parties.

7.4.2 No action or failure to act by the Owner, A/E or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

7.4.3 Contractor agrees that he can be adequately compensated by money damages for any breach of this Contract which may be committed by the Owner and hereby agrees that, no default, act, or omission of the Owner or the Architect, except for failure to make payments as required by the Contract Documents, shall constitute a material breach of the Contract entitling Contractor to cancel or rescind the provisions of this Contract or (unless the Owner shall so consent or direct in writing) to suspend or abandon performance of all or any part of the Work. Contractor hereby waives any and all rights and remedies to which he might otherwise be or become entitled, saving only its right to money damages.

7.5 *Severability*

In the event that any provision of this contract shall be adjudged or decreed to be invalid, such ruling shall not invalidate the entire agreement but shall pertain only to the provision in question and the remaining provisions shall continue to be valid, binding, and in full force and effect.

7.6 *Tests*

7.6.1 If the Contract Documents, laws, ordinances, rules, regulations, permits, resolutions or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Owner at least 24 hours notice of its readiness so that the Owner or the A/E or other representatives of the Owner may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests or approvals conducted by public authorities. Site inspections, tests conducted on site or tests of materials gathered on site, which the contract requires to be performed by independent testing entities, shall be contracted and paid for by the Contractor. Examples include, but are not limited to, the testing of cast-in-

place concrete, foundation materials, soil compaction, pile installations, caisson bearings, and steel framing connections.

- 7.6.2 All materials and workmanship (if not otherwise designated by the specifications) shall be subject to inspection, examination or test by the Owner, A/E, and other representatives of the Owner, at any and all times during the manufacture and/or construction and at any and all places where such manufacture and/or construction are carried on. Special, full-sized and performance tests shall be as described in the specifications. Without additional charge, the Contractor shall furnish promptly all reasonable facilities, labor and materials necessary to make tests safe and convenient.
- 7.6.3 The selection of bureaus, laboratories and/or agencies for the inspection and tests of supplies, materials or equipment shall be subject to the approval of the Owner. Satisfactory documentary evidence, including but not limited to certificates of inspection and certified test reports, that the material has passed the required inspection and tests must be furnished to the Owner, with a copy to the A/E, by the Contractor prior to the incorporation of the materials in the Work or at such times as to allow for appropriate action by the Owner.
- 7.6.4 Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor. Tests required by Contractor's or Subcontractor's error, omission or non-compliance with the Contract Documents, shall be paid for by the Contractor.
- 7.6.5 It is specifically understood and agreed that an inspection and approval of the materials by the Owner shall not in any way subject the Owner to pay for the said materials or any portion thereof, even though incorporated in the Work, if said materials shall in fact turn out to be unfit to be used in the Work, nor shall such inspection be considered as any waiver of objection to the Work on account of the unsoundness or imperfection of the material used.

ARTICLE 8 CONTRACT TIME

8.1 DEFINITION

- 8.1.1 Unless otherwise provided, the Contract Time is the period of time specified in the Construction Agreement for Substantial Completion of the Work as defined herein, including authorized adjustments thereto. The Contractor shall complete his Work within the Contract Time.
- 8.1.2 The date of commencement of the Work is the date established in the Notice to Proceed

The Contractor shall not commence work or store materials or equipment on site until written Notice to Proceed is issued or until the Contractor otherwise receives the Owner's written consent. The Contractor shall commence work no later than ten (10) days after the date established in the Notice to Proceed.
- 8.1.3 The date of Substantial Completion of the Work or designated portion thereof is the date determined by Owner when: (1) construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended; and (2) the Contractor has satisfied all other requirements for Substantial Completion which may be set forth in the Contract Documents.

- 8.1.4 The date of Final Completion of the Work is the date determined by the Owner when the Work is totally complete, to include punch list work, in accordance with the Contract Documents and the Owner may fully occupy and utilize the Work for the use for which it is intended.
- 8.1.5 The term “day” as used in the Contract Documents shall mean calendar days unless otherwise specifically designated.

8.2 PROGRESS AND COMPLETION

- 8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.
- 8.2.2 The Contractor shall begin the Work on the date of commencement as defined herein. He shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial and Final Completion as required by the Contract Documents.

8.3 CLAIMS FOR TIME EXTENSIONS

- 8.3.1 The time during which the Contractor is delayed in the performance of the Work by the acts or omissions of the Owner, the A/E or their employees or agents, acts of God, unusually severe and abnormal climatic conditions, fires, floods, epidemics, quarantine restrictions, strikes, riots, civil commotion or freight embargoes, or other conditions beyond the Contractor's control and which the Contractor could not reasonably have foreseen and provided against, shall be added to the time for completion of the Work (i.e., the Contract Time) stated in the Agreement; however, no claim by the Contractor for an extension of time for delays will be considered unless made in compliance with the requirements of this Article and other provisions of the Contract Documents.
- 8.3.2 The Owner shall not be obligated or liable to the Contractor for, and the Contractor hereby expressly waives any claims against the Owner on account of any indirect or direct damages, costs or expenses of any nature which the Contractor, its Subcontractors, or Sub-subcontractor's or any other person may incur as a result of (1) any delays, reasonable or unreasonable, foreseeable or unforeseeable which are either not caused by the acts or omissions of the Owner, its agents or employees or which arise from or out of (or due to) causes not within the control of the Owner, its agents or employees, or (2) any reasonable delay regardless of its cause, it being understood and agreed that the Contractor's sole and exclusive remedy in any such events shall be an extension of the Contract Time, but only as determined in accordance with the provisions of the Contract Documents.
- 8.3.3 The burden of proof to substantiate a claim for an extension of the Contract Time shall rest with the Contractor, including evidence that the cause was beyond his control. It shall be deemed that the Contractor has control over the supply of labor, materials, equipment, methods and techniques of construction and over the Subcontractors and suppliers, unless otherwise specified in the Contract Documents.
- 8.3.4 In the event of Changes in the Work, the Contractor must identify any additional time required in the Proposed Change Order. The Owner need not consider any time extensions for Changes in the Work not included in the Proposed Change Order.
- 8.3.5 No time extensions will be granted as a result of the Contractor's improper or unreasonable scheduling or for the Contractor's failure to have Shop Drawings, Product Data, Samples or Manuals submitted in ample time for review under a reasonable and agreed upon schedule.

- 8.3.6 Delays by Subcontractors or suppliers will not be considered justification for a time extension, except for the same valid reasons and conditions enumerated herein.
- 8.3.7 The Contractor acknowledges and agrees that actual delays due to changes, suspension of work or excusable delays, in activities which according to the schedule do not affect the Contract Time will not be considered to have any effect upon the Contract Time and therefore will not be the basis for a time extension.
- 8.3.8 The Contractor acknowledges and agrees that time extensions will be granted only to the extent that: (1) excusable delays exceed the available flexibility in the Contractor's schedule; and (2) Contractor can demonstrate that such excusable delay actually caused, or will cause, delay to the Contractor's schedule that will extend the Contract Time.
- 8.3.9 With respect to Suspensions of Work under Paragraph 3.6 Suspension of Work herein, the Contractor shall be entitled to an extension of the Contract Time not to exceed the length of time that the Work was suspended (unless as determined under this Article and the other requirements of the Contract Documents that a further extension is justified and warranted) if the claim is submitted in accordance with the requirements of this Article, and if the suspension is not due to any act or omission of the Contractor, any Subcontractor or Sub-subcontractor or any other person or organization for whose acts or omission the Contractor may be liable. The Contractor's claim will be evaluated in accordance with the terms of this Article.
- 8.3.10 The Contractor shall not be entitled to any extension of time for delays resulting from any conditions or other causes unless it shall have given written Notice to the Owner, within seven (7) calendar days following the commencement of each such condition or cause, describing the occurrence, the activities impacted and the probable duration of the delay. The Contractor's complete claim submittal for a time extension shall be submitted no later than twenty (20) calendar days after cessation of the delay or within such other longer period as the Owner may agree in writing to allow.
- 8.3.11 No such extension of time shall be deemed a waiver by the Owner of his right to terminate the Contract for abandonment or delay by the Contractor as herein provided or to relieve the Contractor from full responsibility for performance of his obligations hereunder.

8.4 CHANGE ORDER WORK

- 8.4.1 The Contractor shall make every reasonable effort to perform Change Order work within the Contract Time and in such manner as to have minimum delaying effects on all remaining work to be performed under the contract. If, however, the Change Order work results in an unavoidable increase in the time required to complete the project, an extension of the Contract Time may be granted to the Contractor for the Change Order work. The Contractor's request therefor shall be determined in accordance with the provisions of Article 8.3 Claims for Time Extensions herein and as follows:
- .1 If the time required for performance of the Change Order work has an unavoidable direct delaying effect on the primary sequence of work activities remaining after rescheduling (e.g., the critical path in CPM type scheduling), the overall contract time may be extended by the minimum number of days required for the Change Order work as mutually agreed upon by the Owner and the Contractor;

- .2 If the time required for performance of the Change Order work does not have an unavoidable direct delaying effect on the primary sequence of work activities but is ordered by the Owner at a time such that insufficient Contract Time remains for completion of the Change Order work (and any limited number of contingent work activities), the Contract Time may be extended by the minimum number of days required for the Change Order work as mutually agreed upon by the Owner and the Contractor but only for the Change Order work and contingent activities, all other unaffected work shall be performed within the Contract Time;
- .3 Failure of the Owner and the Contractor to agree on a Contract Time extension as specified in .1 and .2 above shall not relieve the Contractor from proceeding with and performing the Change Order work promptly, as well as in such manner as to have minimal delaying effects on all remaining work to be performed under the Contract. Such disagreement shall be resolved as soon as practical by negotiation.

8.5 LIQUIDATED DAMAGES FOR DELAY

- 8.5.1 The damages incurred by the Owner due to the Contractor's failure to complete the Work within required Milestone dates and the Contract Time, including any extensions thereof, shall be in the amount set forth in the Construction Agreement, for each consecutive day beyond the Milestone dates or the Contract Time (Sundays and all holidays included) for which the Contractor shall fail to complete the Work.
- 8.5.2 The amount of liquidated damages provided in this Contract is neither a penalty nor a forfeiture and shall compensate the Owner solely for the Owner's inability to use the Work for its fully intended purpose, and is not intended to, nor does said amount include: (1) any damages, additional or extended costs, incurred by the Owner for extended administration of this Contract, or by the Owner's agents, consultants or independent contractors for extended administration of this Contract, or (2) any additional services, relating to or arising as a result of the delay in the completion of the Work. Owner shall be entitled to claim against Contractor for its actual damages and any amounts not specifically included within the liquidated damages as set forth herein. Such costs shall be computed separately and together with liquidated damages, either deducted from the Contract Sum or billed to the Contractor, at the option of the Owner.

8.6 TIME EXTENSIONS FOR WEATHER

- 8.6.1 The Contract Time will not be extended due to inclement weather conditions that are normal to the general locality of Work site. The time for performance of this Contract includes an allowance for workdays (based on a 5-day workweek) which, according to historical data, may not be suitable for construction work.
- .1 The following is the schedule of monthly anticipated normal inclement weather workdays for the project location and will constitute the base line for monthly weather time extension evaluations.

ANTICIPATED NORMAL INCLEMENT WEATHER WORK-DAYS INCLUDED IN THE CONTRACT TIME OF PERFORMANCE											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
7	7	7	7	9	7	7	7	6	6	6	7

- 8.6.2 The Contractor, in his planning and scheduling of the Work as required by the Contract Documents, shall allow for the normal inclement weather for the locality of the Work site. If the Contractor believes that the Progress of the Work has been adversely affected and that it will directly result in a failure to meet Completion within the Contract Time, by weather conditions above and beyond the amount normally expected, he shall submit a written request to the Owner with a copy to the A/E for an Extension of Time, pursuant to Paragraph 8.3 Claims for Time Extensions.
- 8.6.3 Such request shall be evaluated by the Owner in accordance with the provisions of the Contract Documents and shall include a comparison of actual weather statistics compiled by City of Lynchburg's Department of Public Works, for the time of year, locality of the particular Work site with the days claimed by the Contractor and the anticipated normal inclement weather as stated in subparagraph 8.6.1. The normal inclement weather expected has been included in the designated Contract time for completion. The decision of the Owner shall be final.
- 8.6.4 The Contractor shall not be entitled to any money damages whatsoever for any delays resulting from inclement weather, whether normal or abnormal, foreseeable or unforeseeable. The Contractor and Owner stipulate and agree that for delays due to weather as determined in 8.6.3, the Contractor's sole relief is a time extension granted in accordance with this Article 8.6 Time Extensions for Weather.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

- 9.1.1 The Contract Sum is stated in the Construction Agreement and, including authorized adjustments thereto, is the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents. The Contract Sum includes, but is not limited to, the Contractor's profit and general overhead and all costs and expenses of any nature whatsoever (including without limitation taxes, labor and materials), foreseen or unforeseen, and any increases in said costs and expenses, foreseen or unforeseen, incurred by the Contractor in connection with the performance of the Work, all of which costs and expenses shall be borne solely by the Contractor. The Contractor agrees to assume all increases in costs of any nature whatsoever that may develop during the performance of the Work.

9.2 SCHEDULE OF VALUES

- 9.2.1 For Lump Sum Price Type Contracts, before the pre-construction meeting, the Contractor shall submit to the Owner and A/E, a schedule of values allocated to the various portions of the Work, prepared on payment forms provided by the Owner and supported by such data to substantiate its accuracy as the Owner may require. This schedule of values, unless rejected by the Owner, shall be used as a basis for the Contractor's Applications for Payment.
- 9.2.2 For Unit Price type contracts, the Contractor shall utilize the payment request form provided by the Owner, wherein the schedule of values shall correspond with the individual unit price bid items. When so requested by the Owner, the Contractor shall provide a more detailed cost breakdown of the unit price items.

- 9.2.3 Contractor may include in his schedule of values a line item for "mobilization" which shall include a reasonable amount for mobilization for the Contractor and his Subcontractors. The Contractor shall not front-end load his schedule of values.

9.3 APPLICATION FOR PAYMENT

- 9.3.1 The Contractor shall submit to the A/E three (3) originally executed, itemized Application for Payment (and one (1) copy to the Owner) on or about the day of each month determined by the Owner. The Application for Payment shall be notarized, indicate in complete detail all labor and material incorporated in the Work during the month prior to submission, and supported by such data substantiating the Contractor's payment request as the Owner may require. The Application for Payment shall also contain Contractor's certification that due and payable amounts and bills have been paid by the Contractor for work for which previous Certificates of Payment were issued and payments received from the Owner.
- 9.3.2 Payment may be made for the value of materials, which are to be incorporated into the finished Work, and which are delivered to and suitably stored and protected on the Work site. The Contractor shall provide releases or paid invoices from the Seller to establish, to the Owner's satisfaction, that the Owner has title to said material. Stored materials shall be in addition to the Work completed and shall be subject to the same retainage provisions as the completed Work. Material once paid for by the Owner becomes the property of the Owner and may not be removed from the Work site without the Owner's written permission.
- 9.3.3 The requirements for the payment of materials stored on-site shall remain unchanged. The requirements for payment for materials stored off-site shall include, but is not limited to, those specified in Paragraph 9.3.2 and the additional requirements hereinafter specified. Material stored off-site under this provision shall be included in the definition of Work, Article 1 Contract Documents.
- 9.3.3.1. The requirements of Paragraph 10.2 Safety of Persons and Property are fully applicable to materials stored off-site.
- 9.3.3.2 For purposes of administering this provision, the following definitions are provided.
- a. Material stored NEAR the Work Site: A storage location shall be considered near the work site if it is not more than fifty (50) miles (approximately a one-hours drive) from the Work Site.
- b. Material stored DISTANT from the Work Site: Locations beyond the limit of fifty (50) miles shall be considered distant.
- 9.3.3.3 All proposed off-site locations, regardless of whether they are near or distant, shall be approved by the Owner prior to any payment under this Article. The approval process will include an inspection of the proposed storage site, which may or may not coincide with any inspection of materials stored.
- 9.3.3.4 Prior to payment for any material stored off-site, said material shall be inspected to verify that it is properly stored; i.e., segregated, inventoried, identified as the property of the Owner and Contractor and duly protected as required in Article 10.2 Safety of Persons and Property. This material shall be clearly identified and physically segregated from any other material or stock, in such a manner that it is clear, from casual observation, that said material is not a part of any other stock or stored material.

- 9.3.3.5 For materials stored distant to the Work site, the Contractor shall reimburse the Owner for all reasonable costs incurred by the Owner, to include but not limited to salary, transportation, lodging and per diem, for the Owner's or the A/E's employees to travel to and from the storage locations for the purpose of verifying the material is properly stored. It is anticipated that such trips would occur whenever additional material is claimed for payment and/or at least every six (6) months until the material is delivered to the work site.
- 9.3.3.6 Except for unusual circumstances, the Contractor will not be required to reimburse the Owner's costs for visits to storage locations near the work site.
- 9.3.3.7 The Contractor shall hold the Owner harmless from any and all losses, additional costs, direct or indirect damages and/or delays, whatsoever, which may occur as a result of a failure of the Contractor to deliver (or have delivered), in a timely manner, materials (for which payment has been made) to the work site for installation and incorporation into the Work.
- 9.3.3.8 The Contractor shall provide to the Owner, a Release of Lien or other suitable certification by the Seller, in addition to paid invoices, verifying that the Contractor has valid title to all materials for which payment is requested. The Seller, however, shall not be required to waive his rights for recovery, if his contract is breached.
- 9.3.4 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to as "liens". The Contractor further warrants that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing Work at the site or furnishing materials and equipment for the Project that is subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.
- 9.3.5 The Contractor's Application for Payment shall provide that the payment request attests that all Work for which the request is made has been completed in full according to the drawings, specifications and other terms of the Contract Documents. By submitting his Application for Payment, the Contractor also represents that he has no knowledge that any Subcontractor or suppliers have not been fully and timely paid and that, insofar as he knows, the only outstanding items for payment with respect to the Contract are those to be paid from the funds for which Application is being made.

9.4 CERTIFICATES FOR PAYMENT

- 9.4.1 The A/E will, within seven (7) calendar days after the receipt of the Contractor's Application for Payment, recommend a Certificate for Payment to the Owner, for such amount as the A/E determines is properly due, with his reasons for withholding or adjusting a Certificate as provided in Paragraph 9.6 Payments Withheld, if any.
- 9.4.2 After the Certificate for Payment is recommended by the A/E, the Owner will review it and make any changes deemed necessary by the Owner's Representative. The recommendation of the Certificate for Payment by the A/E does not waive or limit the Owners right to reduce the amount of the payment due to the Contractor as determined to be appropriate by the Owner.

9.4.3 The recommendation of a Certificate for Payment will constitute a representation by the A/E to the Owner, based on his observations at the site as provided in Article 2 Architect/Engineer hereof and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief: (1) the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial or Final Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate); and that (2) the Contractor is entitled to payment in the amount certified. However, by recommending a Certificate for Payment, the A/E shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the moneys previously paid on account of the Contract Sum.

9.4.3.1(1) The form of each application for payment shall be on a form approved by the City. Payment for stored material delivered but not incorporated in the work will be the invoiced amount only. Stored materials drawdown shall be approved by the Owner. Submit applicable invoices with Application for Payment. Monthly partial payment request shall be submitted in **TRIPPLICATE** to Owners representative for approval by the 25th of the month so that the Owner can approved payment request by the first working day of the next month. Partial payments shall be made on a monthly basis on or before the end of the next month for which the work was performed, in accordance with the Contract Documents.

(2) The Owner shall pay to the Contractor 95 percent of the total amount due and the Owner shall retain ten (5) percent of the amount due until all work has been performed strictly in accordance with the Contract Documents and until such work has been accepted by the Owner.

9.5.1 The Owner shall make payment in the manner and within thirty (30) calendar days after receipt of the Certificate of Payment from the A/E based upon the Owner's approval or adjustment of said Certificate. The Contractor shall be paid the amount approved or adjusted by the Owner, less 5% retainage which is being held to assure faithful performance; provided however, that said retainage is not applicable to Time and Material Change Orders.

9.5.1.1 In relation to punch list or other uncompleted work and in lieu of a portion of the above-specified five- percent 5% retainage, the Owner may, at its sole discretion, elect to retain fixed amounts directly relating to the various items of uncompleted Work. All amounts withheld shall be included in the Final Payment.

9.5.2 The Contractor shall, within seven (7) days after receiving payment from the Owner, do one of the following:

1. Pay all Subcontractors for the proportionate share of the total payment received from the Owner for work performed by each Subcontractor under the contract; or

2. Notify the Owner and Subcontractor(s), in writing, of his intention to withhold all or part of the Subcontractor's payment with the reason for nonpayment.

9.5.3 The Contractor shall make payment to Subcontractors as heretofore specified. Each payment shall reflect the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work.

- 9.5.4 The Contractor shall provide the Owner with his social security number, if an individual, and their federal identification number if a corporation, partnership, or proprietorship.
- 9.5.5 The Contractor shall be obligated to pay unpaid Subcontractors interest on payments that are not made in accordance with this Article 9.5 Progress Payments. The rate of interest shall be in compliance with the Prompt Payment section of the Virginia Public Procurement Act of the Code of Virginia. The Contractor shall, by an appropriate agreement with each Subcontractor require each Subcontractor to make payments to his sub-subcontractors according to all the same requirements as provided in this Article 9.5 Progress Payments.
- 9.5.6 The Owner may, upon written request, furnish to any Subcontractor, if practicable, information regarding the percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the Owner on account of Work done by such Subcontractor.
- 9.5.7 Neither the Owner nor the A/E shall have any obligation to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.
- 9.5.8 No Certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

9.6 PAYMENTS WITHHELD

- 9.6.1 The Owner may withhold the payment in whole or in part, if necessary to reasonably protect the Owner. If the A/E is unable to make representations as provided in subparagraph 9.4.3 and to recommend payment in the amount of the application, he will notify the Owner as provided in subparagraph 9.4.1. If the Contractor and the Owner cannot agree on a revised amount, the Owner will promptly issue a Certificate for Payment for the amount for which he is able to make representations with respect to payment due for work performed. The Owner may also decline to certify or make payment or, because of subsequently discovered evidence or subsequent observations, the Owner may nullify the whole or any part of any Certificate for Payment previously issued.
- 9.6.2 The Owner may withhold from the Contractor so much of any payment approved by the A/E, as may in the judgment of the Owner be necessary:
- .1 To protect the Owner from loss due to defective work not remedied;
 - .2 To protect the Owner upon receipt of notice of the filing in court or in an arbitration proceeding as may be required in any third party contract, of verified claims of any persons supplying labor or materials for the Work, or other verified third party claims;
 - .3 To protect the Owner upon reasonable evidence that the Work will not be completed for the unpaid balance of the Contract Sum;
 - .4 To protect the Owner upon reasonable evidence that the Work will not be completed within the Contract Time established by this Contract; or
 - .5 To protect the Owner upon the Contractor's failure to properly schedule and coordinate the work in accordance with or as required by the Contract Documents, or failure to provide progress charts, revisions, updates or other scheduling data as required by the Contract

Documents, or upon the Contractor's failure to provide as-built drawings as required herein, or upon Contractor's failure to otherwise substantially or materially comply with the Contract Documents.

- 9.6.3 If required by the Construction Agreement, the Contractor shall, concurrent with his submission of the Construction Schedule, submit a practicable and realistic payment schedule showing the dates on which the Contractor will submit each and every Application for Payment and the amount he expects to receive for each and every monthly progress payment. If during the performance of the Work, the Contractor expects to receive an amount for a monthly progress payment larger than that indicated on the payment schedule, the Contractor shall notify the Owner at least thirty (30) days in advance of that payment so that the necessary allocation of funds can be processed. In the event the Contractor fails to submit a practicable and realistic payment schedule, the Contractor's Application for Payment shall be honored only to the extent that the Work is actually performed and that the proportion of payments made to the Contract Sum does not exceed the proportion of the Contract Time expired as of the time of the request.

9.7 FAILURE OF PAYMENT

If the Owner does not make payment to the Contractor within the thirty (30) calendar days after receipt of the Contractor's Application for Payment by the A/E through no fault of Contractor, and the Owner otherwise not being entitled under the Contract Documents or applicable law to withhold payment, then the Contractor may, upon fifteen (15) additional days' written Notice to the Owner and the A/E, stop the Work until payment of the amount owing has been received. In such event, the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, which shall be effected by appropriate Change Order as provided herein.

9.8 SUBSTANTIAL COMPLETION AND GUARANTEE BOND

- 9.8.1 Unless otherwise specified in Article 9.9 Final Completion and Final Payment, when the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in Article 8 Contract Time, the Contractor shall request in writing that the A/E and the Owner perform a Substantial Completion inspection. Prior to such inspection the Contractor shall:

.1 If applicable, secure a Certificate of Occupancy for the Project or a designated portion thereof; and

.2 Submit five (5) copies each of the Operations and Maintenance Manuals to the A/E as specified and one (1) copy to the Owner.

- 9.8.2 The Owner shall determine whether the project is substantially complete and shall compile a punch list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- 9.8.3 When the Owner on the basis of his inspection determines that the Work or a designated portion thereof is substantially complete, the A/E will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion and shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance. The Certificate of Substantial Completion shall be submitted to the

Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

- 9.8.4 The Contractor shall have thirty (30) days from the Date of Substantial Completion to complete all items on the punch list to the satisfaction of the Owner. If the Contractor fails to complete all punch list items within the designated time, the Owner shall have the option to correct or conclude any remaining items by utilizing its own forces or by hiring others. The cost of such correction of remaining punch list items by the Owner or others shall be deducted from the final payment to the Contractor.
- 9.8.5 Guarantees and warranties required by the Contract Documents shall commence on the Date of Final Completion of the Work, unless otherwise provided in the Certificate of Substantial or Final Completion, or the Contract Documents. Provided, however, that if Contractor does not complete certain punch list items within this time period, specified in 9.8.4, all warranties and guarantees for such incomplete Punch List items shall become effective upon issuance of final payment for the project.
- 9.8.5.1 The Contractor shall guarantee for a term of one (1) year from the date of Final Completion or Final Payment, (unless otherwise provided for in the Certificate(s) of Substantial or Final Completion or the Contract Documents): (1) the quality and stability of all materials equipment and Work; (2) all the Work against defects in materials, equipment or workmanship; and (3) all shrinkage, settlement or other faults of any kind which are attributable to defective materials or workmanship. The Contractor shall remedy at his own expense, when so notified in writing to do so by the Owner, and to the satisfaction of the Owner, the Work or any part thereof that does not conform to any of the warranties and guaranties described in the Contract Documents.
- 9.8.5.2 In order to make good the guarantee as herein required, the Contractor shall deposit with the Owner, after Substantial Completion but before Final Payment, a Guarantee Bond(s) issued by a surety licensed to do business in Virginia and otherwise acceptable to the Owner, for the faithful performance of the guarantee. Said Bond(s) shall be for a period of one (1) year and in the amount of five percent (5%) of the final gross value of the Contract.
- 9.8.5.3 The Contractor shall complete repairs during the guarantee period, within five (5) working days after the receipt of Notice from the Owner and if the Contractor shall fail to complete such repairs within the said five (5) working days, the Owner may employ such other person or persons as it may deem proper to make such repairs and pay the expenses thereof out of any sum retained by it, provided nothing herein contained shall limit the liability of the Contractor or his surety to the Owner for non-performance of the Contractor's obligations at any time.
- 9.8.6 The issuance of the Certificate of Substantial Completion does not indicate final acceptance of the project by the Owner, and the Contractor is not relieved of any responsibility for the project except as specifically stated in the Certificate of Substantial Completion.
- 9.8.7 Upon Substantial Completion of the Work, or designated portion thereof, and upon application by the Contractor and certification by the A/E, the Owner shall make payment, adjusted for retainage and payments withheld, if any, for such Work or portion thereof, as provided in the Contract Documents.
- 9.8.8 Should the Owner determine that the Work or a designated portion thereof is not substantially complete, he shall provide the Contractor a written Notice stating why the project or designated

portion is not substantially complete. The Contractor shall expeditiously complete the Work and shall re-request in writing that the Owner perform a substantial completion inspection.

9.9 FINAL COMPLETION AND FINAL PAYMENT

9.9.1 A Certificate of Final Completion shall be issued by the A/E prior to final payment. At the Owner's sole option, this Final Completion Certificate may be issued without a Certificate of Substantial Completion. The Contractor, prior to application for Final Payment and within the time specified for completion of the Work, shall complete all Work, to include punch list items and provide operating manuals and as-built data, for the Work, as completed and in place. Said Certificate of Final Completion shall be issued, even if a Certificate of Substantial Completion has been issued previously and temporary authority to operate the Work has been granted.

9.9.1.1 The Certificate of Final Completion shall certify that all Work has been completed in accordance with Contract Documents and is ready for use by the Owner.

9.9.2 For all projects where Substantial Completion Certificates have been issued for various portions of the Work, at differing times, the Contractor shall request and the Owner shall, prior to final payment, issue a Certificate of Final Completion which certifies that all required Work, including punch list items, has been completed in accordance with the Contract Documents.

9.9.3 Neither the final payment nor any remaining retainage shall become due until the Contractor submits to the A/E the following:

- .1 An Application for Payment for all remaining monies due under the Contract.
- .2 Consent of surety, if any, to final payment;
- .3 If required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of claims arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish waiver of claims satisfactory to the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any such claim. If any such claim remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such claim, including all costs and reasonable attorneys' fees;
- .4 As-built drawings, operation and maintenance manuals and other project closeout submittals, as required by the Contract Documents;
- .5 Construction releases as required by the Contract Documents from each property owner on whose property an easement for construction of this project has been obtained by the Owner, such release to be in the forms to be provided by the Owner. This release is for the purpose of releasing the Owner and the Contractor from liability, claims, and damages arising from construction operations on or adjacent to the easement and includes proper restoration of the property after construction. It shall be the Contractor's sole responsibility to obtain all such releases and furnish them to the Owner; and
- .6 A written certification that:
 - .1 The Contractor has reviewed the requirements of the Contract Documents,

- .2 The Work has been inspected by the Contractor for compliance with all requirements of the Contract Documents,
- .3 Pursuant to this inspection, the Contractor certifies and represents that the Work complies in all respects with the requirements of the Contract Documents,
- .4 The Contractor further certifies and represents that all equipment and systems have been installed in accordance with the Contract Documents and have been tested in accordance with specification requirements and are operational, and
- .5 The Contractor hereby certifies and represents that the Work is complete in all respects and ready for final inspection.

9.9.4 Upon receipt of the documents required in subparagraph 9.9.3 and upon receipt of a final Application for Payment, the A/E and Owner will promptly make a final inspection. When the A/E finds the Work acceptable under the Contract Documents and the Contract fully performed, he will promptly issue a final Certificate for Payment and a Final Certificate of Completion.

The Certificate of Completion will state that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance designated in the final certificate for payment is due and payable. The final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.9.3 have been fulfilled. The Owner shall review the Certificate of Payment and shall accept it and issue final acceptance, or reject it and notify the Contractor, within ten (10) days. Final payment to the Contractor shall be made within thirty (30) days after final acceptance. All prior estimates and payments, including those relating to change order work shall be subject to correction by this final payment.

9.9.5 The making of Final Payment shall constitute a waiver of all claims by the Owner, except those arising from:

- .1 Unsettled claims;
- .2 Faulty, defective, or non-conforming Work discovered or appearing after Substantial or Final Completion;
- .3 Failure of the Work to comply with the requirements of the Contract Documents;
- .4 Terms of any warranties or guarantees required by the Contract Documents; or
- .5 Fraud or bad faith committed by the Contractor or any subcontractor or supplier during performance of work but discovered by Owner after Final Payment.

9.9.6 The acceptance of Final Payment shall constitute a waiver of all claims by the Contractor, except those previously made in writing and so identified by the Contractor, as unsettled at the time of the final Application for Payment. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this Contract or the Performance or the Guarantee Bonds.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

- 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The requirement applies continuously throughout the Contract performance, until Final Payment is made, and is not limited to regular working hours.

10.2 SAFETY OF PERSONS AND PROPERTY

- 10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:
- .1 All employees on the Work and all other persons who may be affected thereby;
 - .2 All the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractor's. Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law; and
 - .3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, permits, resolutions and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.
- The Contractor shall at all times safely guard the Owner's property from injury or losses in connection with the Contract. He shall at all times safely guard and protect his own work and adjacent property as provided by law and the Contract Documents, from damage. All passageways, guard fences, lights and other facilities required for protection by local authorities or local conditions must be provided and maintained without additional cost to the Owner.
- 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.
- 10.2.4 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.
- 10.2.5 The Contractor is responsible for the proper packing, shipping, handling and storage (including but not limited to shipment or storage at the proper temperature and humidity) of materials to be incorporated in the Work, so as to insure the preservation of the quality and fitness of the material for proper installation and incorporation in the Work, as required by the Contract Documents.

For example, but not by way of limitation, Contractor shall, when necessary, place material on wooden platforms or other hard and clean surfaces and not on the ground and/or place such material under cover or in any appropriate shelter or facility. Stored materials or equipment shall be located so as to facilitate proper inspection. Material and equipment that is delivered crated shall remain crated until ready for installation. Lawns, grass plots or other private property shall not be used for storage purposes without the written permission of the owner or lessee unless otherwise within the terms of the easements obtained by the Owner.

- 10.2.6 In the event of any indirect or direct damage to public or private property referred to in Paragraphs 10.2.1.2 and 10.2.1.3, caused in whole or in part by an act, omission or negligence on the part of the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable, the Contractor shall at his own expense and cost promptly remedy and restore such property to a condition equal to or better than existing before such damage was done. The Contractor shall perform such restoration by underpinning, replacing, repairing, rebuilding, replanting, or otherwise restoring as may be required or directed by the Owner, or shall make good such damage in a satisfactory and acceptable manner. In case of failure on the part of the Contractor to promptly restore such property or make good such damage, the Owner may, upon two (2) calendar days written Notice, proceed to repair, replace, rebuild or otherwise restore such property as may be necessary and the cost thereof, or a sum sufficient in the judgment of the Owner to reimburse the owners of property so damaged, will be deducted from any monies due or to become due the Contractor under the Contract.
- 10.2.7 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents and the protection of material, equipment and other property. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner.
- 10.2.8 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger the safety of any portion of the Work.
- 10.2.9 The Contractor shall give notice in writing at least forty-eight (48) hours before breaking ground, to all persons, Public Utility Companies, owners of property having structures or improvements in proximity to site of the Work, superintendents, inspectors, or those otherwise in charge of property, streets, water pipes, gas pipes, sewer pipes, telephone cables, electric cables, railroads or otherwise, who may be affected by the Contractor's operation, in order that they may remove any obstruction for which they are responsible and have representative(s) on site to see that their property is properly protected. Such notice does not relieve the Contractor of responsibility for any damages and claims. Nor does such notice relieve the Contractor from his responsibility to defend and indemnify the Owner from actions resulting from the Contractor's performance of such work in connection with or arising out of the Contract.
- 10.2.10 The Contractor shall protect all utilities encountered while performing its work, whether indicated on the Contract Drawings or not. The Contractor shall maintain utilities in service until moved or abandoned. The Contractor shall exercise due care when excavating around utilities and shall restore any damaged utilities to the same condition or better as existed prior to starting the Work, at no cost to the Owner. The Contractor shall maintain operating utilities or other services, even if they are shown to be abandoned on the Contract Drawings, in service until new facilities are provided, tested and ready for use.

10.2.11 The Contractor shall return all improvements on or about the site and adjacent property which are not shown to be altered, removed or otherwise changed to conditions which existed prior to starting work.

10.2.12 The Contractor shall protect the Work, including but not limited to, the site, stored materials and equipment, excavations, and excavated or stockpiled soil or other material, intended for use in the Work, and shall take all necessary precautions to prevent or minimize damage to same and to prevent detrimental effect upon his performance or that of his subcontractors, caused by or due to rain, snow, ice, run-off, floods, temperature, wind, dust, sand and flying debris. For example, but not by way of limitation, Contractor shall, when necessary, utilize temporary dikes, channels or pumping to carry-off, divert or drain water, and shall as necessary tie-down or otherwise secure the Work and employ appropriate covers and screens.

10.3 OBLIGATION OF CONTRACTOR TO ACT IN AN EMERGENCY

10.3.1 In case of an emergency that threatens immediate loss or damage to property and/or safety of life, the Contractor shall act to prevent threatened loss, damage, injury or death. The Contractor shall notify the Owner of the situation and all actions taken immediately thereafter. If the Contractor fails to act and any loss, damage, injury or death occurs that could have been prevented by the Contractor's prompt and immediate action, the Contractor shall be fully liable to the Owner or any other party for all costs, damages, claims, actions, suits, costs of defense, and all other expenses arising therefrom or relating thereto.

10.3.2 Prior to commencing his work and at all times during the performance of the Work, the Contractor shall provide the Owner two, twenty-four hour (24) emergency phone numbers where his representatives can be contacted.

ARTICLE 11 INSURANCE FOR CONTRACTS

11.1 INSURANCE

The contractor shall be required to obtain and maintain in effect throughout the length of the contract liability insurance or Workmen's Compensation Insurance, and also Comprehensive Liability Insurance, together covering bodily injuries to his employees and the public, received as a consequence of the performance of the work under this contract. The contractor shall not commence work under this contract until he has obtained all insurance requirements under this section and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all insurance required of the subcontractor has been obtained and approved. Certificates will be required for the Engineer's approval prior to beginning work. All certificates of insurance shall name "The City of Lynchburg, it's officers and employees as an additional insured".

- A. Contractor's Automobile Liability (Bodily Injury and Property Damage) combined single limit coverage shall be provided for the following limits:

Bodily Injury Liability	&	
Property Damage & Liability		\$1,000,000 each occurrence

The contractor's insurance provider shall use occurrence form CA001 Ed. 01/80.

- B. Contractor's Workmen Compensation Insurance as required by Federal, State, and Municipal laws for the protection of all contractor's employees working on or in connection with the project, including broad form all states and voluntary compensation coverage's.

- B. Contractor's comprehensive general liability (Bodily Injury and Property Damage) combined single limit coverage shall be provided for the following limits:

Bodily Injury Liability &
Property Damage & Liability \$1,000,000 each occurrence

The contractor's insurance provider shall use occurrence form CG0001, Ed. 11/88.

- C. Comprehensive Liability Insurance shall include the following coverages:
"X", "C", and "U" Hazards
Owner's Protection Liability
Contractor's Protective Liability
Personal Injury (all insuring agreements) deleting the employee exclusion
Broad Form Property Damage, including completed operations- to modify care, custody, or control exclusion
Contractual Liability – required when a hold harmless agreement has been signed.
- D. Excess catastrophe coverage shall be provided by the contractor with a minimum limit of \$4,000,000.00
- E. Any Insurance maintained by the City shall apply in excess of and shall not contribute with insurance provided by the contractor.
- F. Fire, Extended Coverage, Vandalism, and Malicious Mischief (Completed Value Builder's Risk) Insurance for full insurable value of the project shall be provided by the contractor. The contractor shall secure, if applicable, "All Risk" type Builder's Risk Insurance. The Builder's Risk Insurance shall be for the benefit of the owner, the contractor, and the subcontractors, as their interest may appear.
- G. For Railroad crossing and work performed on Railroad Company's property, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
 - 1. Workers' Compensation and Employers' Liability Insurance- coverage to meet fully the Statutory or regulatory requirements applicable in connection with death, disability or injury to Principal's employees.
 - 2. General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence. Policy should include Products and

Completed Operations coverage and contractual liability coverage to cover the obligations assumed under the agreement and shall not deny coverage for operations conducted within 50 feet of a Railroad hazard. The railway shall be named as a certificate holder and as an additional insured with regards to the operations being performed.

3. Automobile Liability insurance having a combined single limit of \$500,000 per occurrence.
4. In the event Principle cannot obtain contractual liability insurance to cover the obligation assumed in the agreement (see #2), Principal shall furnish Railway Company with a Railroad Protective Liability Policy having a combined single limit of \$2,000,000 per occurrence. Depending on the type of work to be performed, this coverage may be added to the Master Railroad Protective Insurance policy for a premium fee of \$1,000. This provision does not negate the need to provide items 1 through 3, other than the contractual liability requirement.

- H. The contractor shall require his surety to certify on the insurance certificate that the insurance coverage specified herein is fully in effect, both in scope and in amount. If insurance coverage is effected with more than one company, the individual certificates shall identify the items of insurance listed above which the individual companies cover.
- I. All insurance shall be written by insurance companies listed to do business in the Commonwealth of Virginia and acceptable to the owner.

ARTICLE 12 CHANGES AND MODIFICATIONS IN THE WORK

12.1 CHANGES IN THE WORK

- 12.1.1 The Owner, without invalidating the Contract and without Notice to the surety, may order a Change or Modification in the Work consisting of additions, deletions or other revisions to the general scope of the Contract, or changes in the sequence of the performance of the Work. The Contract Sum and the Contract Time shall be adjusted accordingly. All such Modifications in the Work shall be authorized by Change Order, and all Work involved in a Change shall be performed in accordance with the terms and conditions of this Contract. If the Contractor should proceed with a Change in the Work upon an oral order, by whomsoever given, it shall constitute a waiver by the Contractor of any claim for an increase in the Contract Sum and/or Contract Time, on account thereof.

12.2 FIELD ORDER

- 12.2.1 A Field Order is a written order to the Contractor signed by the Owners designated representative, interpreting or clarifying the Contract Documents or directing the Contractor to perform minor changes in the Work. Any work relating to the issuance of a Field Order shall be performed promptly and expeditiously and without additional cost to the Owner and within

the Contract Time, unless the Contractor submits a Proposed Change Order, defined below, which is approved by the Owner. Field Orders shall be numbered consecutively by date of issuance by the Owner.

12.3 OWNER CHANGE REQUEST

- 12.3.1 A Owner Change Request is a written request from the Owner to the Contractor that describes a proposed Change in the Work. The Contractor is required to submit a complete proposal for the total cost and additional time, if any, necessary to perform the proposed Change in the Work. Owner Change Requests shall be numbered consecutively by date of issuance by the Owner.

12.4 CONTRACTOR'S PROPOSED CHANGE ORDER

- 12.4.1 A Contractor's Proposed Change Order is a written request from the Contractor to the Owner requesting a change in the Contract Amount and/or Contract Time. A Contractor's Proposed Change Order is submitted as a proposal in response to a Owner Change Request or as a claim for an increase in the Contract Sum or Contract Time pursuant to the issuance of a Field Order, or as a result of unforeseen circumstances, such as an unknown site conditions.

Change Orders for unforeseen site conditions will only be entertained if the Contractor has not accepted responsibility for the unforeseen site conditions pursuant to other provisions in the Contract Documents. A Contractor's Proposed Change Order must be submitted within twenty (20) calendar days of the issuance of a Owner Change Request or a Field Order or the discovery of an unforeseen circumstance. The CONTRACTOR shall not be entitled to time and/or costs of any nature from the OWNER as a result of his failure to comply with this provision. Contractor's Proposed Change Orders shall be numbered consecutively by date of issuance by the Contractor. The Contractor shall also indicate on the Proposed Change Order the number of the Owner Change Request or the Field Order to which it responds. The Contractor understands and agrees to the City's provisions and policy regarding Change orders as outlined in Article 1 section 1.12 of the General Requirements.

- 12.4.2 In the case of unit price items, it is understood and agreed by the Contractor that the estimates of the quantities in unit price items are approximate only and presented solely for the purpose of comparing bids and may not represent the actual amount of work to be performed. The Contractor, therefore, understands and agrees that the Owner reserves the right to increase, decrease or eliminate entirely the quantity of work to be done under any item. If called upon to do more work under any unit price item named in the Bid Documents, he will perform all such additional work and accept as payment the unit price named in the proposal, subject to the 20% deviation limitations specified in subparagraph 12.4.2.2.
- 12.4.2.1 The Contractor's Proposed Change Order shall be determined by applicable unit prices, if any, as set forth in the Contract.
- 12.4.2.2 However, if changes in quantities are greater or lesser than twenty percent (20%) of the original bid quantity the Owner or the Contractor shall have the right to request a decrease or an increase in the unit price for the quantity greater than 120% or less than 80% of the original bid quantity.

- 12.4.2.3 It shall be understood that such unit prices shall constitute full payment for the extra work performed, including, but not limited to, "general conditions" costs, plant, materials, labor, equipment, overhead, profit, and safety requirements.
- 12.4.3 If no such unit prices are set forth, the Contractor's proposal shall be on a lump sum basis and shall be itemized and segregated by labor, equipment, and materials for the various components of the Change in the Work (no aggregate labor total will be acceptable) and shall be accompanied by signed proposals of any Subcontractors who will perform any portion of the Change in the Work and of any persons who will furnish materials or equipment for incorporation therein.
- 12.4.3.1 The portion of the proposal relating to labor, whether by the Contractor's forces or the forces of any of its Subcontractors, may include reasonably anticipated gross wages of Job Site labor, including foremen, who will be directly involved in the Change in the Work (for such time as they will be so involved), plus separately identified payroll costs (including premium costs of overtime labor, if overtime is authorized, Social Security, Federal or State unemployment insurance taxes and fringe benefits required by collective bargaining agreements entered into by the Contractor or any such Subcontractor in connection with such labor).
- 12.4.3.2 The portion of the proposal relating to materials may include the reasonably anticipated direct costs to the Contractor or to any of its Subcontractors of materials to be purchased for incorporation in the Change in the Work, plus transportation and applicable sales or use taxes.
- 12.4.3.3 The proposal may further include the Contractor's and any of his Subcontractor's reasonably anticipated equipment rental costs, except small hand tools, in connection with the Change in the Work.
- 12.4.4 Base Cost is defined as the total of labor, material and equipment rentals as described in subparagraphs 12.4.3.1, 12.4.3.2 and 12.4.3.3. The actual net cost in money to the Owner for the Change in the Work shall be computed as follows:
- .1 If the Contractor performs the Change in the Work without use of subcontractors or sub-subcontractors, his compensation will be the Base Costs as described above, plus a maximum mark-up of 15% for overhead and profit.
 - .2 If the work is performed by a bona fide Subcontractor, his compensation will be the Base Costs as described above plus a maximum mark-up of 15% for overhead and profit. The Contractor's compensation will be a maximum mark-up of five percent (5%) of the Subcontractors Base Costs for his overhead and profit.
 - .3 If the work is performed by a bona fide Sub-subcontractor, his compensation will be the Base Costs as herein described plus a maximum mark-up of 15% for overhead and profit. The mark-up of any Sub-subcontractor's work by the Contractor and all intervening tiers of Subcontractors shall not exceed a total of 10%.
- 12.4.5 The mark-up on the cost of labor, materials, and equipment described in Paragraphs 12.4.4.1, 12.4.4.2, and 12.4.4.3 shall compensate the Contractors, Subcontractor and Sub-subcontractor for all indirect costs associated with or relating to the Change in the Work including, but not limited to, labor and/or equipment inefficiency, changes in sequence, delays, interferences, impact on unchanged work, gross receipts tax, superintendent, small tools, reproduction,

administration, insurance, unrelated safety requirements, temporary structures and offices, all other general and administrative, home office and field office expenses.

- 12.4.6 The Proposed Change Order may also include the cost of increases in premiums for the Standard Labor and Material Payment Bond and the Standard Performance Bond, provided coverage for the cost of the Change in Work results in such increased costs. At the Owner's request, the Contractor shall provide proof of his notification to the Surety of the change in the Work and of the Surety's agreement to include such change in its coverage. The cost of the increase in premiums shall not be marked up.
- 12.4.7 In the event that it is necessary to increase the Contract Time in order to perform the Change in the Work, the Contractor shall provide an estimate of the increase in the Contract Time as part of the Proposed Change Order.. The Contractor's request for a time extension shall be evaluated in accordance with the criteria described in Article 8.3 Claims for Time Extensions.
- 12.4.8 If the Contractor's Proposed Change Order is rejected by the Owner as being within the scope of the Work required by the Contract Documents the Owner may, at its sole option and discretion, direct the Contractor to perform the Work which is the subject of the said Proposed Change Order; the Contractor shall then promptly proceed with said Work. Nothing herein shall excuse the timely performance by the Contractor of the Work because any Proposed Change Order is pending.

12.5 CHANGE ORDER

- 12.5.1 A Change Order is a written order to the Contractor signed by the Owner, issued after execution of the Contract, authorizing a Change in the Work or an adjustment in the Contract Sum and/or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum and/or the Contract Time. Change Orders shall be numbered consecutively by date of issuance by the Owner and shall, if applicable, indicate the number of the Field Order(s), Request for Proposal(s) and/or Proposed Change Order(s) to which it relates.
 - 12.5.1.1 If the Owner determines that the Contractor's Proposed Change Order, submitted pursuant to Article 12.4 for a change in the Contract Sum or Contract Time, is acceptable, the Owner shall prepare and issue a Change Order which will authorize the Contractor to proceed with the Change in the Work for the cost and time stated in the Proposed Change Order, or as otherwise may be agreed upon by the parties. The amounts stated in the Change Order for the cost and time to perform the Change in the Work shall be binding on the parties.
- 12.5.2 After issuance of the Change Order, the Contractor shall ensure that the amount of the Performance and Payment Bond coverage has been revised to reflect the increase in the Contract Sum due to the Change Order.
- 12.5.3 If the Contractor's Proposed Change Order is not acceptable to the Owner or if the parties are unable to otherwise agree as to the cost and time necessary to perform the Change in the Work, the Owner may, at its sole option and discretion, direct the Contractor to perform the Work on a time and material basis. The Contractor shall then promptly proceed with the Work.
- 12.5.4 If the Owner elects to have the Change in the Work performed on a time and material basis, the same shall be performed, whether by the Contractor's forces or the forces of any of its

Subcontractors or Sub-subcontractor's, at actual cost to the entity performing the Change in the Work (without any charge for administration, clerical expense, supervision or superintendent of any nature whatsoever). The percent mark-ups for the Contractor, Subcontractors and Sub-subcontractor's shall be as described in subparagraphs 12.4.4 and 12.4.5.

- 12.5.4.1 Prior to starting the work on a time and material basis, the Contractor shall notify the Owner in writing as to what labor, materials, equipment or rentals are to be used for the Change in the Work. During the performance of the Change, the Contractor shall submit to the Owner daily time and material tickets, which shall list the categories and amounts of labor and equipment for which Change Order compensation is to be charged for the previous work day. Such tickets shall specifically include the following information: location and description of the Change in the Work, the classification of labor employed, including names and social security numbers of laborers, labor trades used, man hours, wage rates, insurance, taxes and fringe benefits, equipment and materials suppliers' quotations with detailed break-out and pricing, rental equipment hours and rates, and materials quantities and unit prices and such other evidence of cost as the Owner may require.
- 12.5.4.2 The Contractor shall commence submission of daily time and material tickets immediately upon commencement of the Change Order Work and continue to submit them until completion of the Change Order Work. The Owner may require authentication of all time and material tickets and invoices by persons designated by the Owner for such purpose.
- 12.5.4.3 No payment shall be made to the Contractor for any portion of the Change in the Work unless and until such daily time and material tickets and invoices are submitted. The submission of any such ticket or invoice shall not constitute an acknowledgment by the Owner that the items thereon were reasonably required for the Change in the Work.
- 12.5.4.4 For any work performed on a time and material basis, the Contractor shall submit its complete submission of the reasonable actual cost and time to perform the Change in the Work within twenty (20) days after such Work has been completed. The Owner shall review the costs and time submitted by the Contractor on the basis of reasonable expenditures and savings of those performing the Change in the Work. If such costs and time are acceptable to the Owner, or if the parties otherwise agree to the actual reasonable cost to perform the Change in the Work, a Change Order will be issued for the cost and time agreed upon. The amounts stated in the Change Order for the cost and time to perform the Change in the Work shall be binding upon the parties.

12.6 UNILATERAL CHANGE ORDER

- 12.6.1 In the event that the parties are unable to agree as to the reasonable cost and time to perform the Change in the Work and the Owner does not elect to have the Change in the Work performed on a time and material basis, the Owner may issue a unilateral Change Order based on the reasonable cost and time to perform the Change in the Work as determined by the Owner. Failure of the parties to reach agreement regarding the cost and time of performing the Change in the Work shall not relieve the Contractor from performing the Change in the Work promptly and expeditiously. Any unresolved dispute resulting from the Unilateral Change Order shall be resolved pursuant to the procedure outlined in Article 13 Claims and Dispute Procedure.

12.7 DECREASES AND WORK NOT PERFORMED (Deductive Change Orders)

- 12.7.1 Should it be deemed expedient by the Owner to decrease the dimensions, quantity of material or work, or vary in any other way the work herein contracted for, the Owner may direct by written Change Order, such decreases to be made or performed without in any way affecting the validity of the Contract. The Contractor shall, comply with the Change Order from the Owner. The difference in expense occasioned by such decrease shall be deducted from the amount payable under this Contract.
- 12.7.2 When work is deleted from the Contract by Owner, the amounts to be credited to the Owner shall reflect the same current pricing as if the work were being added to the Contract at the time the deletion is ordered, and documentation will be required for a credit as specified in Article 12.5.4. If such deleted materials and equipment shall have already been purchased and stored on site and cannot be used in other projects, returned for credit or cannot be returned for credit at the price paid by the Contractor at the time of purchase, the Contractor shall be entitled, upon proper documentation and certification, to an adjustment in the pricing of the credit to avoid hardship to the Contractor. If necessary in order to establish such reasonable value, the Contractor may be required to submit a detailed breakdown of his original bid for the items or work involved.
- 12.7.3 If work is not performed, and such deletion of work was not directed or approved by the Owner, the Owner shall ascertain the amount of the credit due.

12.8 CHANGES IN LINE AND GRADE

- 12.8.1 The Owner reserves the right to make such alterations in the line and grade of various structures or pipe lines shown on the drawings, as may be necessitated by conditions found during construction or that in the judgment of the Owner appears advisable. Such alterations shall in no way affect the validity of the Contract
- 12.8.1.1 In case of a unit price contract, if such changes increase the amount of the work or materials, the Contractor will be paid according to the quantity of work actually done at the prices established for such work under the Contract.
- 12.8.1.2 In case of a lump sum contract, the price for the work shall be determined as specified in Article 12.4 Proposed Change Order.

12.9 SUBSURFACE CONDITIONS FOUND DIFFERENT

- 12.9.1 Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the drawings or indicated in the specifications, he shall immediately give Notice to the Owner of such conditions before they are disturbed. The Owner shall thereupon promptly investigate the conditions and if he finds that they materially differ from those shown on the drawings or indicated in the specifications, he shall at once make such changes in the drawings and/or specifications as he may find necessary. Any increase or decrease of cost resulting from such changes shall be adjusted in the manner provided herein for adjustments as to extra and/or additional work and changes.

12.10 OTHER CLAIMS

If the Contractor claims that additional cost or time is involved because of, but not limited to, (1) any written interpretation pursuant to Article 2 Architect/Engineer, (2) any order by the Owner to stop the Work pursuant to Article 3 Owner where the Contractor was not at fault, (3) failure of payment by the Owner pursuant to Article 9 Payments and Completion, or (4) any written order for a minor change in the Work issued pursuant to Article 12.8. Changes in Line and Grade; the Contractor shall make such claim as provided in THIS Section 12 Changes and Modification in the Work.

ARTICLE 13 CLAIMS AND DISPUTE PROCEDURE

- 13.1 No claim shall be made under this Contract until and unless the Contractor has failed to obtain a Change Order pursuant to the previous sections of this article. The Contractor shall give the Owner written Notice of his intent to file a claim within seven (7) calendar days after rejection of his Proposed Change Order.
- 13.2 No claim shall be allowed and no amounts paid for any and all costs incurred if Notice of intent to file a claim is not given to the Owner as herein provided.
- 13.3 The complete written claim, with all supporting documentation, shall be submitted to the Purchasing Agent no later than sixty (60) days after final payment. If the claim is not disposed of by agreement, the Purchasing Agent shall reduce his decision to writing and mail or otherwise forward a copy thereof to the Contractor within thirty (30) days of receipt of the claim.
- 13.4 The Purchasing Agent's decision shall be final unless the Contractor appeals within thirty (30) days by submitting a written letter of appeal to the City Manager. The City Manager shall render a decision within sixty (60) days of receipt of the appeal.
- 13.5 No litigation shall be instituted prior to the exhaustion of the aforesaid claims process. The Contractor may not introduce factual matters in such litigation that were not set forth in the aforesaid claims process.

ARTICLE 14 UNCOVERING AND CORRECTION OF WORK

14.1 UNCOVERING OF WORK

- 14.1.1 If any portion of the Work should be covered contrary to: (1) the request of the A/E or Owner; (2) requirements specifically expressed in the Contract Documents; or (3) the requirements of applicable Construction Permits, it must, if required in writing by the Owner, be uncovered for their observation and shall be replaced at the Contractor's expense.
- 14.1.2 If any other portion of the Work has been covered which the Owner has not specifically requested to observe prior to being covered, the Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused solely by the Owner, in which event the Owner shall be responsible for the payment of such costs. If such Work be found not in accordance with the Contract Documents and the condition was caused by a separate contractor, Contractor may proceed against said separate contractor as provided in Article 6 Work by Owner or by Separate Contractors.

14.2 WARRANTY AND CORRECTION OF WORK

14.2.1 The Contractor guarantees and warrants to the Owner all work as follows:

- .1 That all materials and equipment furnished under this Contract will be new and the best of its respective kind unless otherwise specified;
- .2 That all Work will be of first-class quality and free of omissions and faulty, imperfect or defective material or workmanship;
- .3 That the Work shall be entirely watertight and leakproof in accordance with all applicable industry customs and practices, and shall be free of shrinkage and settlement which are attributable to defective materials or workmanship;
- .4 That the Work, including but not limited to, mechanical and electrical machines, devices and equipment shall be fit and fully usable for its intended and specified purpose and shall operate satisfactorily with ordinary care;
- .5 That consistent with requirements of the Contract Documents the Work shall be installed and oriented in such a manner as to facilitate unrestricted access for the operation and maintenance of fixed equipment; and
- .6 That the Work will be free of abnormal or unusual deterioration which occurs because of poor quality materials or workmanship.

14.2.2 All Work not conforming to guarantees and warranties specified in the Contract Documents, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment furnished and installed.

14.2.3 The Contractor shall within five (5) working days after receipt of written Notice from the Owner during the performance of the Work, reconstruct, replace or correct all Work rejected by the A/E or Owner as defective, as failing to conform to the Contract Documents, or as not in accordance with the guarantees and warranties specified in the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of reconstructing, replacing or correcting such rejected Work, including compensation for the A/E's additional services made necessary thereby.

14.2.4 If, within one (1) year after the Date of Substantial or Final Completion of the Work or designated portion thereof or within one (1) year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective, not in accordance with the Contract Documents, or not in accordance with the guarantees and warranties specified in the Contract Documents, the Contractor shall correct it within five (5) working days after receipt of a written Notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition pursuant to 14.3 Acceptance of Faulty, Defective or Non-Conforming Work. This obligation shall survive termination of the Contract. The Owner shall give such Notice promptly after discovery of the condition.

- 14.2.5 Subject to limitation as prescribed by law, if at any time deficiencies in the Work are discovered which are found to have resulted from fraud or misrepresentation, or an intent or attempt to defraud the Owner by the Contractor, any Subcontractor or Supplier, the Contractor will be liable for replacement or correction of such Work and any damages which Owner has incurred related thereto, regardless of the time limit of any guarantee or warranty.
- 14.2.6 Any materials or other portions of the Work, installed, furnished or stored on site which are not of the character or quality required by the specifications, or are otherwise not acceptable to the Owner, shall be immediately removed and replaced by the Contractor to the satisfaction of the Owner, when notified to do so by the Owner.
- 14.2.7 If the Contractor fails to correct defective or nonconforming Work as required by Articles 13.2.3 and 13.2.4, or if the Contractor fails to remove defective or nonconforming Work from the site, as required by Article 13.2.6, the Owner may elect to either correct such Work in accordance with Article 3.5 Owner's Right to carry out the Work or remove and store materials and equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten (10) days thereafter, the Owner may upon ten additional days written Notice sell such Work at auction or at public or private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the A/E's additional services made necessary thereby. If such proceeds of sale do not cover all costs that the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.
- 14.2.8 The Contractor shall bear the cost of making good all work of the Owner, separate contractors or others, destroyed or damaged by such correction or removal required under this Article.

14.3 ACCEPTANCE OF FAULTY, DEFECTIVE OR NON-CONFORMING WORK

If the Owner prefers to accept faulty, defective or nonconforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued at Owner's option, to reflect a reduction in the Contract Sum in an amount to be determined by the Owner.

ARTICLE 15 TERMINATION OF THE CONTRACT

15.1 CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within thirty (30) days any sum certified by the Architect/Engineer when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon ten (10) calendar days written Notice to the Owner, stop Work or terminate the Contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that he would have had profit on the entire Contract if he had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall termination of the

Contract by the Contractor terminate the obligations of the Contractor's surety on its payment and performance bonds.

15.2 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE

- 15.2.1 If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, the Owner may terminate the Contract. If the Contractor should refuse or should repeatedly fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials and equipment, or if he should fail to make prompt payment to subcontractors or suppliers of material of labor, or if he should disregard laws, ordinances or the written instructions of the Architect/Engineer or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may terminate the Contract.
- 15.2.2 Prior to termination of the Contract, the Owner shall give the Contractor and his surety ten (10) calendar days written Notice during which the Contractor and/or his surety may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said ten (10) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the ten (10) day notice period. In the alternative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the basis for the termination will be remedied in a time and manner which the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further ten (10) day notice, by notifying the Contractor and his surety in writing of the termination. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.
- 15.2.3 Upon termination of the Contract, the Contractor shall immediately cease work and the Owner shall take possession of the Site and of all materials, tools and equipment thereon and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Owner has finally completed the project through its own resources or those of a subsequent contractor. If the expense of finishing the Work, including compensation for additional design, managerial and administrative services, shall exceed the unpaid balance of the Contract Price, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others. If the unpaid balance of the Contract Price exceeds the costs of finishing the Work, including compensation for additional design, managerial and administrative services, such excess shall be paid to the Contractor.
- 15.2.4 If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the Owner.
- 15.2.5 Termination of the Contract under this Section is without prejudice to any other right or remedy of the Owner.

15.3 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CONVENIENCE

- 15.3.1 Owner may terminate this Contract, in whole or in part, at any time without cause upon giving the Contractor written Notice of such termination. Upon such termination, the Contractor shall

immediately cease Work and remove from the Site all of its labor forces and such of its materials as Owner elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:

- (1) Amounts due for Work performed in accordance with the Contract through the date of termination.
- (2) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled to any compensation or damages for lost profits or for any other type of contractual compensation or damages other than those provided by the preceding sentence. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature.

15.3.2 In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

15.3.3 After receipt of a Notice of Termination, the Contractor shall submit to the Owner his termination claim. Such claim shall be submitted promptly but in no event later than forty-five (45) days from the effective date of termination. Upon failure of the Contractor to submit his termination claim within the time allowed, the Owner may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination.

15.4 CONTRACTOR'S RESPONSIBILITIES UPON TERMINATION

15.4.1 After receipt of a Notice of Termination pursuant to 15.3 Owner's Right to Terminate Contract for Convenience the Contractor shall mitigate any damages to the extent reasonably possible.

15.4.2 In addition to the provisions of 15.4.1, the Contractor shall:

- .1 At the option of the Owner, assign to the Owner, in the manner, at the time, and to the extent directed by the Owner, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- .2 Transfer title and deliver to the Owner in the manner, at the times, and to the extent, if any, directed by the Owner:
 - a) The fabricated or unfabricated parts, work in process, completed Work, supplies, and other material procured as a part of, or acquired in connection with the performance of the Work terminated by the Notice of Termination, and
 - b) The completed or partially completed drawings, releases, information, manuals and other property which, if the Contract had been completed, would have been required to be furnished to the Owner;

- .3 Complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and
- .4 Take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.

15.5 *DISPUTES UPON TERMINATION*

- 15.5.1 The provisions of 13.0 Claims and Dispute Procedures shall be applicable to any claim, dispute or other matter arising because of termination under this Article 15.

SUPPLEMENTAL REQUIREMENTS

1.0 GENERAL SPECIFICATIONS AND STANDARD DETAILS

The City of Lynchburg Manual of Specifications and Standard Details, the VDOT Road and Bridge Specifications (2002), the VDOT Road and Bridge Standards (Vol. I & II) 2001, these Supplemental Specifications, Plans, Special Provisions, Addendum and All Supplementary Documents are parts of the contract and any requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, governance will be determined by the following hierarchy: Special Provisions, Drawings, City of Lynchburg Specifications, and VDOT Specifications. Payment will only be made for those pay items and pay units given on the Bid Form or as resolved within the limits of this contract.

2.0 TESTING

Section 01000-1.20, Utilities, of the Manual of Specifications and Standard Details, shall be revised to read as follows:

Tests called for by the technical specifications shall be made by approved independent laboratories with the full cooperation of the Contractor, and two certified copies reports of such tests shall be submitted to the Owner. The laboratory charges shall be borne by the Contractor. Testing services other than those called for in these contract documents may be called for by the Owner to check compliance with specifications, the testing service charges will be borne by the Owner, but when non-compliance with specification is indicated, the testing service charges will be deducted from the Contract Sum.

3.0 UTILITIES

Section 01000-1.20, Utilities, of the Manual of Specifications and Standard Details, shall be supplemented as follows:

This project involves work in close proximity to existing overhead electric lines. Before any work involving these lines is anticipated or encountered, the Contractor must first request the power company to make safety arrangements to protect his workers and the lines. It is anticipated that these lines will be shielded by the power company for the duration of the project. The actual expense incurred by the Power Company in taking these precautionary measures shall be paid by the City.

Phases of the construction which involve the temporary interruption of electric services shall be scheduled in consultation with the Owner or his representative and shall not be of longer duration than essential to accomplish the purpose for such interruptions.

Advance notice of at least 5 days shall be given to the Owner when the Contractor requires interruption of electric service.

4.0 BLASTING

Section 01000-1.31, Blasting, of the Manual of Specifications and Standard Details, shall be revised to read as follows:

Blasting will not be permitted on this project.

5.0 **TRAFFIC CONTROL**

Section 01000-1.28, Traffic Control, of the Manual of Specifications and Standard Details, shall be revised to read as follows:

It shall be the sole responsibility of the contractor to furnish and maintain, until the work has been accepted by the City, any and all signs, lights, barricades, flashing directional arrows, flagmen, etc. necessary for the safety of the general public, including both vehicular and pedestrian traffic.

Traffic control shall be in accordance with the current Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and the Virginia Work Area Protection Manual (latest edition). All costs for maintenance of traffic shall be included in bid items of this contract.

The contractor shall furnish, install, and maintain amber warning lights at all locations necessary for the control and protection of vehicular traffic. Warning lights placed at or on warning signs shall be flashing lights. Warning lights used for delineation of traffic and at locations of hazardous construction shall be steady-burn lights. Amber warning lights shall be battery power lights conforming to the Institute of Transportation Engineers (ITE) Standard for Flashing and Steady-Burn Barricade Warning Lights.

Type I or Type II barricades shall not be used to channel or delineate traffic flow, drums or barrels of 36" in height and a minimum of 18" in diameter shall be used. Metal drums and simulated barrel panels are not permitted. Construction approach warning signs shall have a standard size of 48" by 48" and shall be the standard diamond shape for warning signs.

Truck mounted crash cushions are required on all limited access highways and on all four or more lane highways with speeds in excess of 45 mph for the following operations: stationary lane closures, mobile maintenance operations occupying all or part of a lane, pavement markings and other situations where such protection is warranted.

The contractor shall promptly remove any excavated material or other debris that may be spilled or tracked onto the traveled pavement during the conduct of his work.

While working in street rights-of-way, traffic is to be maintained in such a manner as to provide safe passage of the public through the construction project at all times. Flagging should only be employed when required to control traffic or when all other methods of traffic control are inadequate to warn and direct drivers. Flaggers must be certified as having taken the VDOT Flagging Course and have the certification card with them while flagging. At least one lane of traffic shall be maintained at all times. While work is not in progress traffic is to be returned to the normal fashion. When two-way traffic is required, the contractor shall construct within the right of way suitable detours around the work.

Upon all road closings and detours, the contractor shall be responsible for notifying LynCom (847-1602) and Communications/Marketing (847-1849) on a daily basis until such time the road is returned to normal operation.

A copy of the MUTCD and the Virginia Work Area Protection Manual is available for the contractor's review in the Office of the City Engineer, Public Works, City Hall, during normal hours. It shall be the responsibility of the contractor to be familiar with the manual and its application to his projects.

SPECIAL PROVISIONS FOR
PROTECTION OF RAILWAY INTEREST

1. AUTHORITIES OF THE RAILWAY ENGINEER AND THE PROJECT ENGINEER:

The authorized representative of Norfolk Southern Corporation, hereinafter referred to as the Railway Engineer, shall have final authority in all matters affecting the safe maintenance of Railway traffic of his Company, including the adequacy of the foundations and structures supporting the Railway tracks.

The authorized representative of the City of Lynchburg, hereinafter referred to as the Project Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

2. NOTICE OF STARTING WORK:

A. The contractor shall not commence any work within the Railway's right-of-way until he has complied with the following conditions:

- a. Given the Railway written notice, with copy to the Project Engineer who has been designated to be in charge of the work, at least ten (10) days in advance of the date he proposes to begin work within Railway right-of-way. This notice shall be addressed to the following:

Office of Chief Engineer
Bridges and Structures
Norfolk Southern Corporation
99 Spring Street, S.W., Box 142
Atlanta, Georgia 30303-0142

- b. Obtained written authorization from the Railway to begin work within Railway right-of-way. Such authorization may include an outline of specific conditions with which he must comply.
- c. Obtained written approval from the Railway of his Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.
- d. Furnished a schedule for all work within the Railway right-of-way as required by paragraph 7.B.1.

B. The Railway's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railway representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

3. INTERFERENCE WITH RAILWAY OPERATIONS:

- A. The Contractor shall so arrange and conduct his work that there will be no interference with Railway operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railway, or to poles, wires, and other facilities of tenants within the right-of-way of the Railway. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railway Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor that requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the Railway is available at the job site.
- B. Whenever work within Railway right-of-way is of such a nature that impediment to Railway operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.
- C. Should conditions arising from or in connection with the work require that immediate and unusual provisions be made to protect operations and property of the Railway, the Contractor shall make such provisions. If in the judgment of the Railway Engineer, or in his absence, the Project Engineer, such provisions are insufficient, either Engineer may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railway or the City.

4. TRACK CLEARANCES:

- A. Before undertaking any work within Railway right-of-way, or before placing any obstruction over any track, the Contractor shall:
 - 1. Notify the Railway's representative at least seventy-two (72) hours in advance of the work;
 - 2. Receive assurance from the Railway's representative that arrangements have been made for flagging service as may be necessary;
 - 3. Receive permission from the Railway's representative to proceed with the work; and
 - 4. Ascertain that the Project Engineer has received copies of notice to the Railway and of the Railway's response thereto.

5. CONSTRUCTION PROCEDURES:

- A. General:

Construction work and operations by the Contractor on or within Railway right-of-way shall be:

1. Subject to the inspection of and approval by the Railway;
2. In accord with the Railway's written outline of specific conditions;
3. In accord with the Railway's general rules, regulations, and requirements, including those relating to safety, fall protection, and personal protective equipment; and
4. In accord with these Special Provisions.

B. Excavation:

The subgrade of an operated track shall be maintained with edge of beam at least ten (10) feet from the centerline of track and not more than twenty-four (24) inches below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.

C. Excavation for Structures:

The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall first be approved by the Project Engineer and the Railway Engineer, but such approval shall not relieve the Contractor from liability.

D. Blasting:

1. The Contractor shall obtain advance approval of the Railway Engineer and the Project Engineer for use of explosives on or adjacent to Railway property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
 - (a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.

- (b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
- (c) No blasting shall be done without the presence of an authorized representative of the Railway. At least seventy-two (72) hours' advance notice to the person designated in the Railway's notice of authorization to proceed (see paragraph 2B) will be required to arrange for the presence of an authorized Railway representative and such flagging as the Railway may require.
- (d) The Contractor shall have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railway property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

2. The Railway representative will:

- (a) Determine approximate location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean up.
- (b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these Special Provisions.

E. Maintenance of Railway Facilities:

- 1. The Contractor shall be required to maintain all ditches and drainage structures free of silt or other obstructions that may result from his operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railway right-of-way and repair any other damage to the property of the Railway or its tenants.
- 2. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

F. Storage of Materials and Equipment:

Materials and equipment shall not be stored where they will interfere with Railway operations, nor on the right-of-way of the Railway without first having obtained permission from the Railway Engineer, and such permission will be with

the understanding that the Railway will not be liable for damage to such material and equipment from any cause and that the Railway Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save the Railway, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

G. Cleanup:

Upon completion of the work, the Contractor shall remove from within the limits of the Railway right-of-way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said right-of-way in a neat condition satisfactory to the Railway Engineer or his authorized representative.

6. **DAMAGES:**

- A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment, and materials caused by Railway traffic.
- B. Any cost incurred by the Railway for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railway by the Contractor.

7. **FLAGGING SERVICES:**

A. When Required:

Under the terms of the agreement between the City and the Railway, the Railway has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railway's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railway structure or the railway roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.

Normally, the Railway will assign one flagman to a project; but in some cases, more than one may be necessary, such as within yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that

violate instructions given by the Railway's authorized representative or performs work that has not been scheduled with the Railway's authorized representative, a flagman or flagmen may be required full-time until the project has been completed.

B. Scheduling and Notification:

1. Not later than the time that approval is initially requested to begin work on Railway right-of-way, Contractor shall furnish to the Railway Engineer and Project Engineer a schedule for all work required to complete the portion of the project within Railway right-of-way and arrange for a job site meeting between the Contractor, the Project Engineer, and the Railway Engineer or his authorized representative. Flagman or Flagmen will not be provided until the job site meeting has been conducted and the Contractor's work scheduled.
2. The Contractor will be required to give the Railway representative at least ten (10) working days of advance written notice of intent to begin work within Railway right-of-way in accordance with these Special Provisions. Once begun, if such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railway representative at least three (3) working days of advance notice before resuming work on Railway right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railway representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Project Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Project Engineer. If flagging is required, no work shall be undertaken until the flagman or flagmen are present at the job site. It may require up to thirty (30) days' advance notice in order to obtain flagging initially from the Railway. When flagging begins, the flagman is usually assigned by the Railway to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may again require up to thirty (30) days' notice to obtain flagging from the Railway. Due to Railway labor agreements, it is necessary for the Contractor to provide five (5) working days' advance notice in order for the flagging service and the responsibility for payment thereof to be terminated.
3. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work within Railway right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the City or the Railway.

C. Payment:

1. The City shall be responsible for paying the Railway directly for any and all costs of flagging which may be required to accomplish the construction.
2. The estimated cost of flagging is four hundred dollars (\$450) per day based on a ten- (10-) hour workday. This cost includes the base pay for the flagman, overhead, and includes an estimated thirty-dollar (\$30) per diem charge for travel expenses, meals and lodging. The charge to the City by the Railway will be the actual cost based on the rate of pay for the Railway's employee or employees who are available for flagging service at the time the service is required.
3. Work by a flagman in excess of eight (8) hours per day or forty (40) hours per week, but not more than twelve (12) hours per day, will result in overtime pay at one-and-one-half (1½) times the appropriate rate. Work by a flagman in excess of twelve (12) hours per day will result in overtime at two (2) times the appropriate rate. If work is performed on a holiday, the flagging rate is two-and-one-half (2½) times the normal rate.
4. Railroad work involved in preparing and handling bills will also be charged to the City. Charges to the City by the Railway shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and, Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

1. The Contractor and the Project Engineer will review and sign the Railway flagman's time sheet (Form 11123), attesting that the flagman was present during the time recorded. The Railway may remove the flagman from flagging service if this time sheet is not signed. If the flagman is removed, the Contractor will not be allowed to re-enter the Railway right-of-way until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. Questions regarding the need for Railway flagging should be directed to the Railway's System Engineer of Public Improvements at 404/529-1641. The Contractor will confirm all verbal complaints in writing within five (5) working days, with a copy provided to the Project Engineer. All written correspondence should be addressed to the following:

Office of Chief Engineer

Attn: T. D. Wyatt
Bridges & Structures
System Engineer Public Improvements
Norfolk Southern Corporation
99 Spring Street, S.W., Box 142
Atlanta, Georgia 30303-0142

2. The Railway flagman or flagmen assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin, and again on the last day that he performs such services, for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

8. HAUL ACROSS RAILROAD:

- A. Where the plans show or imply that materials of any nature must be hauled across tracks of the Railway, the Contractor will be required to make all necessary arrangements with the Railway regarding means of transporting such materials across the Railway. The Contractor will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by Railway personnel.
- B. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railway until a private crossing agreement has been executed between the Contractor and Railway.

9. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans, are included in the force account agreement between the City and the Railway, or will be covered by appropriate revisions to same which will be initiated and approved by the City and/or the Railway.
- B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railway for the same to be accomplished at the Contractor's expense.

10. COOPERATION AND DELAYS:

- A. It shall be the Contractor's responsibility to arrange a schedule with the Railway for accomplishing stage construction involving work by the Railway or tenants of the Railway. In arranging his schedule he shall ascertain, from the Railway, the lead time required for assembling crews and materials and shall make due allowance therefore.
- B. No charge or claim of the Contractor against either the City or the Railway will be allowed for hindrance or delay on account of railway traffic; any work done by the Railway or other delay incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these Special Provisions.

11. TRAINMAN'S WALKWAYS:

Along the outer side of each exterior track of multiply-operated tracks, and on each side of a singly-operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than ten (10) feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with ten- (10-) foot minimum clearance from centerline of track, shall be placed.

12. GUIDELINES FOR PERSONNEL WITHIN RAILWAY RIGHT-OF-WAY:

- A. All persons shall wear hardhats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy or other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Safety boots are strongly recommended.
- B. No one is allowed within twenty-five (25) feet of the centerline of track without specific authorization by the flagman.
- C. All persons working near the track while a train is passing are to beware of dragging bands, chains, and protruding or shifted cargo.
- D. No one is allowed to cross tracks without specific authorization from the flagman.
- E. All welders and cutting torches working within twenty-five (25) feet of the centerline of the track must stop work when a train is passing.
- F. No steel tape or chain will be allowed to cross or touch rails without permission.

13. GUIDELINES FOR EQUIPMENT WITHIN RAILWAY RIGHT-OF-WAY:

- A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus fifteen (15) feet of the centerline of track without specific permission from the Railway Engineer and the flagman present.
- B. No crane or boom equipment will be allowed to foul a track or lift a load over the track without flag protection and track time.
- C. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- D. All cranes and boom equipment under load, including pile-driving equipment, will stop work while train is passing.**
- E. Swinging loads must be secured to prevent movement while train is passing.
- F. No loads will be suspended above a moving train.
- G. No equipment will be allowed within twenty-five (25) feet of the centerline of track without specific authorization by the flagman.
- H. Trucks, tractors, or any other equipment will not touch ballast line without specific permission from the Railway Engineer and the flagman present.
- I. No equipment or load movement will be allowed above or within twenty-five (25) feet of a standing train or other Railway equipment without specific authorization by the flagman.
- J. All operating equipment within twenty-five (25) of the centerline of track must halt operations when a train is passing. The flagman may halt all other operating equipment if the flagman determines the operation to be dangerous to the passing train.
- K. All equipment, loads, and cables are prohibited from touching rails.
- L. During clearing and grubbing operations, heavy equipment shall not be employed to remove vegetation from the Railway embankment without specific permission from the Railway Engineer and flagman present.
- M. No equipment or materials will be parked or stored on Railway property without specific permission from the Railway Engineer.
- N. All unattended equipment that is left parked on Railway property shall be effectively immobilized so that unauthorized persons cannot move it.

- O. All cranes and boom equipment will be turned away from the track after each work day or whenever unattended by an operator.

14. INSURANCE:

- A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
1. Commercial General Liability Insurance having a combined single limit of not less than two million dollars (\$2,000,000) per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include "explosion, collapse, and underground hazard" ("XCU") coverage, shall be endorsed to name the Railway specified in item A.2 below as an additional insured, and shall include a severability-of-interests provision.
 2. Railroad Protective Liability Insurance having a combined single limit of not less than two million dollars (\$2,000,000) each occurrence and six million dollars (\$6,000,000) in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of five million dollars (\$5,000,000) each occurrence and ten million dollars (\$10,000,000) in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

The insurer must be rated A- or better by A. M. Best Company, Inc.

The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers: CG 00 35 01 96 and CG 28 31 10 93; or CG 00 35 07 98 and CG 28 31 07 98.

The names of the insured shall read:

Norfolk Southern Railway Company
Three Commercial Place
Norfolk, Virginia 23510-2191
Attn: D. W. Fries, Director Risk Management

The description of operations must appear in the Declarations, must match the project description in this agreement, and must include the appropriate project and contract identification numbers.

The job location (city and state) and Prime Contractor (name and address) must appear in the Declarations. The official name and address of the City must be identified in the Declarations as the “Involved Governmental Authority or Other Contracting Party.”

Other endorsements/forms that will be accepted are:

Broad Form Nuclear Exclusion – Form IL 00 221
30-day Advance Notice of Non-renewal or cancellation
Required State Cancellation Endorsement
Quick Reference or Index Form CL/IL 240

Endorsements/forms that are NOT acceptable are:

Any Pollution Exclusion Endorsement except CG 28 31
Any Punitive or Exemplary Damages Exclusion
Known injury or Damage Exclusion form CG 00 59
Any Common Policy Conditions form
Any other endorsement/form not specifically authorized above.

- B. If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations within Railway right of way.
- C. Prior to entry on Railway right-of-way, the original Railroad Protective Liability Insurance Policy shall be submitted by the Prime Contractor to the City at the address below for its review and transmittal to the Railway. In addition, certificates of insurance evidencing the Prime Contractor’s and any subcontractors’ Commercial General Liability Insurance shall be issued to the Railway and the City at the addresses below, and shall be forwarded to the City for its review and transmittal to the Railway. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without thirty- (30-) days’ written notice to Railway and the City. The Railway will not permit the Contractor to enter its right-of-way until it has reviewed and approved the evidence of insurance required herein.

CITY:
Mr. Joe Smith
City of Lynchburg
Engineering Department
Lynchburg, VA 24501

RAILWAY:
Director Risk Management
Norfolk Southern Corporation
Three Commercial Place
Norfolk, Virginia 23510-2191

15. FAILURE TO COMPLY:

In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:

- A. The Railway Engineer may require the Contractor to vacate Railway property.
- B. The Project Engineer may withhold all monies due the Contractor on monthly statements.

Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railway Engineer and the Project Engineer.

Office of Chief Engineer
Bridges & Structures
Norfolk Southern Corporation
99 Spring Street, S.W., Box 142
Atlanta, Georgia 30303-0142

File: 117-10033
Milepost: 170.5

TECHNICAL SPECIFICATIONS

REVISIONS TO VDOT ROAD AND BRIDGE SPECIFICATIONS

(c110d0b-0103) **SECTION 110.05 CONSTRUCTION SAFETY AND HEALTH**
STANDARDS of the Specifications is amended to add the following paragraph:

Additionally at a minimum, all Contractor personnel shall comply with the following, unless otherwise determined unsafe or inappropriate in accordance with OSHA regulations:

1. Hard hats shall be worn while participating in or observing all types of field work when outside of a building or outside of the cab of a vehicle, and exposed to, participating in or supervising construction.
2. Respiratory protective equipment shall be worn whenever an individual is exposed to any item listed in the OSHA Standards as needing such protection unless it is shown the employee is protected by engineering controls.
3. Adequate eye protection shall be worn in the proximity of grinding, breaking of rock and/or concrete, while using brush chippers, striking metal against metal or when working in situations where the eyesight may be in jeopardy.
4. Safety vest shall be worn by all exposed to vehicular traffic and construction equipment.
5. Standards and guidelines of the current Virginia Work Area Protection Manual shall be used when setting, reviewing, and removing traffic controls.
6. Flag persons shall be certified according to the Virginia Flagger Certification Program.
7. No person shall be permitted to position themselves under any raised load or between hinge points of equipment without first taking steps to support the load by the placing of a safety bar or blocking.
8. Explosives shall be purchased, transported, stored, used and disposed of by a Virginia State Certified Blaster in possession of a current criminal history record check and a commercial driver's license with hazardous materials endorsement and a valid medical examiner's

certificate. All Federal, State and local regulations pertaining to explosives shall be strictly followed.

9. All electrical tools shall be adequately grounded or double insulated. Ground Fault Circuit Interrupter (GFCI) protection must be installed in accordance with the National Electrical Code (NEC) and current Virginia Occupational Safety and Health agency (VOSH). If extension cords are used, they shall be free of defects and designed for their environment and intended use.

10. No person shall enter a confined space without training, permits and authorization.

11. Fall protection is required whenever an employee is exposed to a fall six feet or greater.

11-22-02 (SPCN)

(c210a0b-0702) **ASPHALT CEMENTS** - Whenever and wherever within the Contract Documents asphalt cements are specified they shall be defined as Strategic Highway Research Project (SHRP) Performance Graded (PG) asphalt cements. Substitution of AASHTO designated asphalt cements with performance graded asphalt cements shall be in accordance with the following:

AASHTO DESIGNATION	SHRP DESIGNATION PERFORMANCE GRADED *
AC-5	PG 52-28
AC-10	PG 58-22
AC-20	PG 64-22
AC-30	PG 70-22
AC-40	PG 70-22

*PG asphalts shall conform to the requirements of AASHTO Provisional Specifications MP-1.

9-5-96, Reissued 7-9-02 (SPCN)

(c212a0b-1202) **SECTION 212.02(a)1. ASPHALT SEALER** of the Specifications is replaced with the following:

1. **Asphalt sealer** shall conform to the requirements of ASTM D 6690 Type II.
4-26-02(SPCN)

(c217a0b-0702) **SECTION 217.09(b) READY-MIXED CONCRETE** of the Specifications is amended to replace the fourth paragraph with the following:

Each batch of concrete, retarded or unretarded, shall be delivered to the site of work and discharged within 2 1/2 hours from the instant the cement is introduced to the mix.

8-1-91, Reissued 7-9-02 (SPCN)

(c217b0b-1202) **TABLE II-17 REQUIREMENTS FOR HYDRAULIC CEMENT CONCRETE** of the Specifications is replaced with the following:

TABLE II-17
Requirements for Hydraulic Cement Concrete

Class of Concrete	Design Min. Laboratory Compressive Strength at 28 Days (f') (psi)	Aggregate Size No.	Nominal Max. Aggregate Size (in.)	Min. Grade Aggregate	Min. Cement Content (lb./cu. yd.)	Maximum Water (lb. water/ lb. cement)	Consistency (in. of slump)	Air Content (%) ¹
A5 Prestressed and other special designs ²	5,000	57 or 68	1	A	635	0.40	0-4	4½ ±1½
A4.5 General	4,500	57	1	A	635	0.45	2-4	6½ ±1½
A4 General	4,000	57	1	A	635	0.45	2-4	6½ ±1½
A4 Posts & rails ³	4,000	7	1/2	A	635	0.45	2-5	7 ±2
A3.5 General	3,500	57	1	A	588	0.49	1-5	6 ±2
A3 General	3,000	57	1	A	588	0.49	1-5	6 ±2
A3 Paving	3,000	57	1	A	564	0.49	0-3	6 ±2
B2 Massive or lightly reinforced	2,200	57	1	B	494	0.58	0-4	4 ±2
C1 Massive unreinforced	1,500	57	1	B	423	0.71	0-3	4 ±2
T3 Tremie seal	3,000	57	1	A	635	0.49	3-6	4 ±2
Latex hydraulic cement concrete ⁴	3,500	7 or 8	1/2	A	658	0.40	4-6	5 ±2
Silica fume concrete	5,000	7 or 8	1/2	A	658 ⁵	0.40	4-7	6 ±2

¹ When a high-range water reducer is used, the upper limit for entrained air may be increased by 1% and the slump shall not exceed 7 inches.

-
- ² When Class A5 concrete is used as the finished bridge deck riding surface, or when it is to be covered with asphalt concrete with or without waterproofing, the air content shall be $5\frac{1}{2} \pm 1\frac{1}{2}\%$.
- ³ When necessary for ease in placement, aggregate No. 7 shall be used in concrete posts, rails, and other thin sections above the top of bridge deck slabs.
- ⁴ The latex modifier content shall be 3.5 gallons per bag of cement. Slump shall be measured approximately $4\frac{1}{2}$ minutes after discharge from the mixer.
- ⁵ Minimum 7% silica fume replacement by weight of the total cementitious material.

Note: The Contractor may substitute a higher class of concrete for that specified at his expense.

(c243a0b-1103) **SECTION 243.02—DETAIL REQUIREMENTS** of the Specifications is amended as follows:

SECTION 243.02(b) 3. - CLASS C is replaced with the following:

Class C: for use above 60 degrees F

SECTION 243.02 (c) - MIXING EPOXY is amended to replace the third sentence of the first paragraph with the following:

Component B shall contain one or more hardening agents that when mixed with Component A will cause the system to polymerize and harden to conform to the requirements of Table II-21.

4-22-03 (SPCN)

(c315a0b-0702) **SAW CUT ASPHALT PAVEMENT**-This work shall consist of saw cutting the existing asphalt pavement to a depth shown on the plans and as directed by the Engineer.

Saw cut asphalt concrete pavement will be measured in linear feet for the depth specified and will be paid for at the Contract unit price per foot, which price shall be full compensation for saw cutting the asphalt pavement to the depth specified.

Payment will be made under:

Pay Item	Pay Unit
Saw cut asphalt conc. (depth)	Linear foot

11-14-96 (SPCN)

(c404a0b-1103) **SECTION 404.05(b) - FILLED JOINTS** of the Specifications is amended to replace the first sentence of the first paragraph with the following:

Materials for filled joints shall conform to the requirements of Section 212 and shall be installed in accordance with the requirements of Section 316.04(m).

7-28-03 (SPCN)

(c413a0b-1203) **SECTION 413.02(b) REMOVING PORTION OF EXISTING STRUCTURE** of the Specifications is amended to replace the first paragraph with the following:

Removing Portion of Existing Structure: The portions to be removed shall be the areas designated on the plans. No portion of the structure shall be removed by blasting or other methods that may damage any portion of the structure that will remain in place. When pneumatic hammers are used to remove concrete, their weight shall be not more than 90 pounds for widening work or 30 pounds for deck repair work. The use of tractor-mounted demolition hammers with a maximum manufacturer's rated striking energy of 1,000 foot-pounds will be permitted for the removal of concrete parapets down to the top of deck and for that portion of the deck where the reinforcing steel will be removed. The use of tractor-mounted demolition hammers, or pneumatic hammers weighing more than 30 pounds, shall not be allowed for the removal of that portion of the deck that is within six inches of the top flange of the beams/girders to remain in the structure. With written approval of the Engineer, hydraulically actuated, jaw type, concrete crushers may only be used for the removal of concrete parapets down to the top of deck. The approval of hydraulically actuated, jaw type, concrete crushers shall be contingent upon continuous satisfactory results with no damage to any portion of the structure that is to remain in place. The removal of concrete parapet on prestressed concrete slab spans or prestressed concrete box beam spans shall be limited to 30-pound pneumatic hammers within two inches of the deck and not more than 90-pound pneumatic hammers for the remainder of the parapet, unless otherwise approved by the Engineer.

7-10-03 (SPCN)

SPECIAL PROVISIONS

SPECIAL PROVISION FOR PROJECT REQUIREMENTS

A. DESCRIPTION OF WORK

The work includes the widening and rehabilitation of the bridge on Bedford Avenue over Norfolk Southern Railway, including associated work on roadway approaches.

B. TECHNICAL SPECIFICATIONS

All roadway and bridge construction shall be in accordance with applicable sections of the Virginia Department of Transportation (VDOT) 2002 Road and Bridge Specifications (RBS) including all applicable Supplemental Specifications and Special Provisions, except as modified and supplemented herein and on the plans. Whenever the terms “Engineer” or “Department” occur in the RBS, they shall be interpreted to mean the City of Lynchburg or its duly appointed representative, hereinafter referred to as the “Engineer.” Where specific sections of the RBS are referenced herein, further references to other specifications contained therein shall also apply.

C. SUBMITTALS

Shop drawings (working drawings) and/or catalog data as required by the RBS and/or the Technical Specifications shall be submitted to the Engineer for review.

D. TESTING

Inspection, testing, and certification shall be performed by a recognized testing laboratory approved by the Engineer, with all costs borne by the Contractor. Work shall be in accordance the VDOT Manual of Instruction of the Materials Division, March 2004 and with VDOT RBS.

E. MEASUREMENT OF QUANTITIES

Measurement of quantities for payment shall be performed by the Contractor, as supervised by the Engineer.

END OF SECTION

**SPECIAL PROVISION FOR
MAINTENANCE OF TRAFFIC**

A. DESCRIPTION OF WORK

All traffic control work shall be completed in accordance with the Virginia Work Area Protection Manual (January 2003), Virginia Road and Bridge Standards (2001), Virginia Road and Bridge Specifications (2002), and the City of Lynchburg Manual of Specifications and Standard Details, as amended by the project plans and specifications.

B. MEASUREMENT AND PAYMENT

Paragraph 1.8P Traffic Control of Section 01200-Measurement and Payment, of the City of Lynchburg Manual of Specifications and Standard Details shall be revised to be read as follows:

Measurement:

All traffic control devices, including but not limited to: Variable Message Boards, Type III Barricades, Traffic Barrier Service Concrete, Construction Sign Posts, Chain Link Fence, Temporary Pavement Markings, Group III Channelizing Devices, will be measured as lump sum.

Payment:

Traffic control will be paid for at the contract lump sum price. This price shall be full compensation for all materials, labor, equipment, and incidentals as required to safely maintain traffic in the project area.

END OF SECTION

**SPECIAL PROVISION FOR
STRUCTURE EXCAVATION**

A. DESCRIPTION OF WORK

All Structure Excavation work shall be completed in accordance with Section 401 of the VDOT Road and Bridge Specifications (2002), and the City of Lynchburg Manual of Specifications and Standard Details, as amended by the project plans and specifications.

B. MEASUREMENT AND PAYMENT

Structure Excavation will be measured in cubic yards of material removed from the limits of vertical planes within 18 inches outside the neat lines of footings or of neat work that does not have footings directly beneath it, such as curtain walls or cantilevered wing walls. It will be measured from the surface of the original ground or approach roadway down to the bottom of the foundation shown on the plans or such foundation as the Engineer may approve, or down to 18 inches below the bottom of the neat work not directly over footings, or to the top of existing concrete where excavation is to permit placing new concrete over existing concrete. Excavated material will be unclassified and the Contractor shall provide the necessary equipment to remove and dispose of any materials encountered in the excavation to the dimensions shown on the plans or as directed by the Engineer. Excavation above the bottom of a proposed roadway template will not be included as structure excavation.

Structure Excavation will be paid for at the contract unit price per cubic yard. This price shall include clearing and grubbing, sheeting, shoring, bracing, placing and compacting backfill, dewatering, furnishing and placing aggregate for weep holes, disposing of unsuitable or surplus material, and clearing the slopes of obstructions caused by construction operations. No separate payment will be made for either excavation of materials of different densities and character or employment of special tools and procedures necessary to accomplish the excavation in an acceptable fashion.

END OF SECTION

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
LOW PERMEABILITY CONCRETES

December 2, 2002c

SECTION 217 of the Specifications is amended as follows:

Section 217.02 (h) is replaced with the following:

- (h) Fly ash** shall conform to the requirements of Section 241. Class F fly ash shall be between 20 percent and 25 percent by mass of the cementitious material. However, no more than 15 percent of the Portland cement of a standard mixture shall be replaced.

Section 217.02 (k) is amended to add the following:

- (k) Silica fume** shall conform to the requirements of AASHTO M307 or ASTM C1240. Silica fume shall replace between 7 percent and 10 percent by mass of the cementitious material. Only silica fume at the rate of 3 percent to 7 percent may be added to all combinations to reduce the early permeability after the approval of the Engineer.

Section 217.08 is amended to add the following:

- (c) Quality Assurance for Low Permeability Concrete (for Concrete in Bridges Only):**

General:

At least two trial batches, using job materials, with permissible combination of cementitious materials shall be prepared, and test specimens shall be cast by the Contractor and tested by the Department for permeability and strength at least a month before the field application. The permeability samples shall be cylindrical specimens with a 4-inch diameter and at least 4-inches in length. They shall be moist-cured as the strength cylinders for acceptance except that the last 3 weeks of cure shall be at 100 degrees Fahrenheit \pm 10 degrees Fahrenheit. Cylinders shall be tested at 28 days in accordance with AASHTO T 277. The test value shall be the result of the average values of tests on two specimens from each batch. Permeability values obtained from trial batches shall be 500 coulombs below the maximum values specified in Table II-17.

Acceptance Tests:

A quality assurance and acceptance procedure that provides for periodic tests of the field concrete for permeability using AASHTO T 277 shall be established. This should include provisions for testing frequency; the range of coulomb values for which full or partial payments would be made; and the values that would require corrective measures to be taken, or rejection of the concrete, should be stated. The following are quality assurance procedures for field evaluations:

A lot shall be a day's production of concrete for the job and shall be used for statistical acceptance procedure for bridge concrete. For each set of cylinders made for compressive strength tests, two additional cylinders shall be made for the permeability test. The Contractor shall be responsible for making all test cylinders, and the Department shall be responsible for the testing of the specimens.

For all classes of concrete, initially one set of permeability cylinders shall be tested for each lot in accordance with AASHTO T 277. If the average coulomb value for this test is less than the coulomb value shown in Table II-17, the lot will be accepted at the full bid price.

If the average test result exceeds the coulomb value in Table II-17, payment for the concrete in that element shall be reduced 0.005 percent for each coulomb above the coulomb value in Table II-17, however, the reduction in price will not exceed 5 percent of the bid price of the concrete. Concrete with a coulomb value that exceeds the maximum required in Table II-17 by 1000 coulomb will be rejected. However, bridge deck with the coulomb value exceeding the maximum required by over 1000 coulomb may be accepted by the Engineer at 95 percent of the bid price if it has the required strength and meets other specification requirements, and the Contractor applies, at his own expense, an approved epoxy concrete overlay to the top of the deck. In such case deck grooving will not be required. The adjustment to the roadway grade shall be made as required by the Engineer at the Contractor's expense.

Similarly, concrete in abutments and pier caps with coulomb value exceeding the maximum required in Table II-17, by more than 1000 coulomb may be accepted at 95 percent of the bid price if it has the required strength and meets other specification requirements, and the Contractor applies at his own expense, an approved epoxy, Type EP-3B and EP-3T in conformance with the requirements of Section 243.02, on top of the pier cap or abutment seat.

The reduction in the bid prices mentioned above shall be applied to the total volume of concrete in bridge members, eg. deck slab of a single span, deck slab of a group of continuous spans, pier or abutment, for which any portion of the concrete in the member did not meet the permeability test requirements.

SECTION 404 of the Specifications is amended as follows:

Section 404.03(k) 1. Curing Concrete is replaced with the following:

1. **Curing Bridge Deck and Overlay Concrete:** Bridge deck and overlay concrete, including latex modified concrete, shall be moist cured for a minimum of 7 days and until 70 percent of f'_c is reached. Moist curing shall be maintained by wet burlap (keep wet) for the duration of the curing and covered with plastic sheeting. Immediately after screeding and until the application of wet burlap and white plastic sheeting (opaque and transparent sheeting may be used when the air temperature falls below 50°F), no surface of the freshly placed concrete shall be allowed to dry. During moist curing, the concrete temperature shall be maintained above 50°F at the outer most surfaces of the concrete mass. Immediately after removing the burlap and plastic sheeting (except for latex-modified concrete), white pigmented curing compound shall be applied while the surface is damp but has no free water standing on it. The application rate shall be 100 to 150 square feet per gallon.

Forms shall remain in place for seven (7) full days after concrete placement. Burlap shall conform to the requirements of AASHTO M182, Class 3 (minimum weight of 10 oz. per square yard and a minimum thread count of 11 per inch).

Section 404.03(l) 1. Weather is amended to replace the 4th paragraph with the following:

Protection shall be provided to prevent rapid drying of concrete as a result of low humidity, high wind, higher concrete temperatures than atmospheric temperatures, or combinations thereof. The Contractor shall perform evaporation rate testing for bridge deck placements and concrete overlays. Immediately after screeding and until the application of wet burlap and white polyethylene sheeting, no surface of the freshly mixed concrete shall be allowed to dry. Fogging, with pressure sprayers acceptable to the Engineer and sufficient to maintain a moist surface, shall be required. The protective measures taken shall be sufficient to maintain an evaporation rate at or below 0.10 pounds per square-foot per hour for normal concrete bridge deck placements or 0.05 pounds per square-foot per hour for concrete overlays over the exposed surface of the concrete. Other preventative measures described in ACI 308 can also be used in addition to fogging. Evaporation retardant films may be applied in a fine mist immediately after screeding to ensure that the surface remains wet until covered. If such materials are used, there shall be no disturbance of the concrete surface after placement of the retardant film and such film shall not be intermixed with the surface mortar. Placement of concrete shall be regulated at a rate such that the finishing operations can be completed and the wet burlap and polyethylene sheeting are placed prior to any drying of the concrete. If plastic shrinkage cracking occurs due to the Contractor's negligence or failure to follow specification requirements, the Engineer may direct the Contractor to make repairs by epoxy injections, concrete removal and replacement or other methods approved by the Engineer at no additional cost to the Department.

All deck, parapet and sidewalk concrete placements shall take place between 10:00pm and 5:00am. Plastic shrinkage cracks will be repaired by epoxy injection, concrete

removal and replacement, or other methods approved by the Engineer, at the Contractor's expense.

Section 404.04 is amended to add after the fifth paragraph the following:

Consolidation: In deck placements, internal vibrators and screeds with vibrating element shall be used. The minimum frequency of the vibrating element shall be 3,000 vibrations per minute. Internal vibration shall be required along transverse and longitudinal edges and joints and areas where the thickness of concrete exceeds 3 inches.

SECTION 405 of the Specifications is amended as follows:

Section 405.05(c) is amended to replace the third paragraph with the following:

Both internal vibrators and external form vibrators shall be used for concrete with strength equal or exceeding 8000 pounds per square inch. The use of external vibration for other concrete will be at the option of the Contractor with approval of the Engineer. Improper placing and vibrating may be cause for rejection.

Section 405.05(f) 4. Is replaced by the following:

The temperature rise in the curing enclosure shall be uniform, with a rate rise of not more than 80 degrees Fahrenheit per hour. Concrete shall be cured at a steam temperature of not more than 180 degrees Fahrenheit, with the steam temperature uniform throughout the curing enclosure, and with a variation of not more than 20 degrees Fahrenheit. Maximum concrete temperature during the curing cycle shall be 190 degrees Fahrenheit. Approved recording thermometers shall be placed so that temperatures can be recorded at a minimum of two locations spaced at or near the third of the length in each curing enclosure and at least one sensor shall measure the temperature in the concrete.

TABLE II-17 Requirements for Hydraulic Cement Concrete of the Specifications is replaced by the following:

**TABLE II-17
Requirements for Hydraulic Cement Concrete**

Class of Concrete	Design Min. Laboratory Compressive Strength at 28 Days (f _c) (psi)	Design Max. Laboratory Permeability at 28 Days (Coulombs)	Nominal Max. Aggregate Size (in)	Min. Cementitious Content (lb./cu yd)	Max. Water/Cementitious Mat. (lb. Water/lb. Cement)	Consistency (in of slump)	Air Content (percent) ¹
A5 Prestressed and other special designs ²	5,000 or as specified on the plans	1,500	1	635	0.40	0-4	4 1/2 ± 1 1/2
A4.5	4,500	2,500	1	635	0.45	2-4	6 1/2 ± 1 1/2
A4 General	4,000	2,500	1	635	0.45	2-4	6 1/2 ± 1 1/2
A4 Post & rails ³	4,000	2,500	0.5	635	0.45	2-5	7 ± 2
A3.5 General	3,500	2,500	1	588	0.49	1-5	6 ± 2
A3 General	3,000	3,500	1	588	0.49	1-5	6 ± 2
A3 Paving	3,000	3,500	1	564	0.49	0-3	6 ± 2
B2 Massive or lightly reinforced	2,200	N.A.	1	494	0.58	0-4	4 ± 2
C1 Massive Unreinforced	1,500	N.A.	1	423	0.71	0-3	4 ± 2
T3 Tremie seal	3,000	N.A.	1	635	0.49	3-6	4 ± 2
Latex hydraulic cement concrete overlay ⁴	3,500	1,500	0.5	658	0.40	4-6	5 ± 2
Silica fume concrete overlay	5,000	1,500	0.5	658 ⁵	0.40	4-7	6 ± 2

- ¹ When a high-range water reducer is used, the target air content shall be increased 1 percent and the slump shall not exceed 7 inches.
- ² When Class A5 concrete is used as the finishing bridge deck riding surface, or when it is to be covered with asphalt concrete with or without waterproofing, the air content shall be $5 \frac{1}{2} \pm 1 \frac{1}{2}$ percent.
- ³ When necessary for ease in placement, aggregate No. 7 shall be used in concrete posts, rails, and other thin sections above the top of bridge deck slabs.
- ⁴ The latex modifier content shall be 3.5 gallons per bag of cement. Slump shall be measured approximately 4.5 minutes after discharge from the mixer.
- ⁵ Minimum 7 percent silica fume replacement by weight of the total cementitious material.

Note: Contractor may substitute a higher class of concrete for that specified at his expense.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 242—FENCES

August 20, 2003

SECTION 242—FENCES of the Specifications is amended as follows:

242.02—DETAIL REQUIREMENTS is replaced by the following:

Steel posts and braces for standard fence and chain link fence may be fabricated from pregalvanized material in lieu of galvanization after fabrication provided ends and other areas of exposed metal are satisfactorily repaired using a material conforming to the requirements of Section 233 of the Specifications.

(a) **Chain Link and Pedestrian Fences:** Fabric material shall be 9-gage core, new, and shall conform to the following:

1. **Galvanized wire fabric for use in chain link fence** shall be hot dip galvanized after weaving in accordance with the requirements of AASHTO M181, Type I Class D, and for use in pedestrian fence shall be hot dip galvanized after weaving in accordance with the requirements of AASHTO M181, Type I Class C.
2. **Aluminum alloy wire fabric** shall conform to the requirements of AASHTO M181, Type III.
3. **Aluminum coated wire fabric** shall conform to the requirements of AASHTO M181, Type II.
4. **Coated wire fabric**
 - a. **Vinyl coated wire fabric** shall conform to the requirements of AASHTO M181, Type IV, Class A or Class B, except that vinyl coated may be No. 9 gage overall, including coating, provided that the core wire has a minimum zinc coat weight of 0.30 ounces per square foot and a minimum breaking strength of 1290 pounds force.
 - b. **Other conforming organic polymer-coated wire fabric** shall conform to the requirements of ASTM F 668 Class 1, Class 2a or 2b
5. **End, corner, and gate posts** shall be one of the following:
 - a. welded or seamless steel galvanized pipe conforming to the requirements of ASTM F1083, Schedule 40

- b. roll formed steel sections shall conform to the requirements of ASTM F1043 Group IIA Type A
 - c. aluminum alloy pipe conforming to the requirements of ASTM F 1043 Group IB.
 - d. galvanized pipe conforming to the requirements of ASTM F 1043 Group IC with Type B external coating and Type D internal coating
 - e. vinyl or other conforming organic polymer-coated pipe conforming to the requirements of ASTM F 1043 Group IA with Type A external and internal coatings
 - f. vinyl or other conforming organic polymer-coated pipe conforming to the requirements of ASTM F 1043 Group IC with Type B external coating and Type D internal coating
6. **Line Posts** shall be one of the following:
- a. steel H-columns shall conform to the requirements of ASTM F1043 Group III, Type A
 - b. round galvanized steel pipe conforming to the requirements of ASTM F1083, Schedule 40
 - c. roll formed C-sections shall conform to the requirements of ASTM F1043 Group IIA, Type A
 - d. aluminum alloy H-columns conforming to the requirements of ASTM B221, alloy 6063-T6
 - e. aluminum alloy pipe conforming to the requirements of ASTM F 1043 Group IB
 - f. galvanized pipe conforming to the requirements of ASTM F 1043 Group IC with Type B external coating and Type D internal coating
 - g. vinyl or other conforming organic polymer-coated pipe conforming to the requirements of (a)5.e. or (a)5.f. herein
7. **Braces** shall be one of the following:
- a. welded or seamless steel galvanized pipe conforming to the requirements of ASTM F1083, Schedule 40
 - b. roll formed steel sections shall conform to the requirements of ASTM F1043 Group IIA, Type A.

- c. aluminum alloy pipe conforming to the requirements of ASTM F 1043 Group IB.
 - d. galvanized pipe conforming to the requirements of ASTM F 1043 Group IC with Type B external coating and Type D internal coating
 - e. vinyl or other conforming organic polymer-coated pipe conforming to the requirements of (a)5.e. or (a)5.f. herein
8. **Gates** shall be complete with hinges, latches, stops, and other necessary fittings. Gate frames shall be fabricated and coated with the same material as the adjoining fence framework and fabric.
9. **Aluminum alloy post surfaces that will be in contact with concrete and up to 1 inch above concrete** shall be uniformly coated with an aluminum impregnated caulking compound or a solvent asphalt fiber filled and aluminum pigmented coating conforming to the requirements of ASTM D 2824 Type III. Care shall be taken to prevent voids in the coating and the smearing of visible surfaces of concrete or posts, except as otherwise noted herein.
10. **Tension wire** shall conform to one of the following:
- a. Aluminum coated tension wire shall meet the requirements of AASHTO M181
 - b. Zinc coated tension wire shall meet the requirements of AASHTO M181, Class 1.
 - c. vinyl coated tension wire shall meet the requirements of AASHTO M181 Class A or Class B. The minimum weight of the zinc coating shall be 0.40 ounces per square foot. The breaking strength of the core wire shall meet the requirements of AASHTO M181 for tension wire.
 - d. Other conforming organic polymer-coated tension wire shall be 0.177 inch in diameter and conform to ASTM F 1664. The breaking strength of the core wire shall meet the requirements of AASHTO M181 for tension wire.
11. **Fittings** shall be fabricated and coated with the same material as the fence framework and fabric

(b) Barbed Wire Fence, Woven Wire Fence and Lawn Fence:

- 1. **Barbed wire** shall conform to one of the following:

- a. ASTM A121, Coating Type Z, Coating Class 3 Design Number 12-4-5-14R
 - b. ASTM A121, Coating Type Z, Design Number 15-4-5-16R except that the tensile strength of the line wire shall be at least 475 pounds per strand and the zinc coating shall be at least 0.70 ounces per square foot.
 - c. Single strand oval shaped wire having a diameter of at least 0.08 inch in its least dimension but not more than 0.135 inch in its greatest dimension and a tensile strength of at least 1150 pounds; wire shall have four barbs of 14-gage wire and a zinc coating of at least 0.30 ounces per square foot.
 - d. Vinyl and other polymer-coated barbed wire shall conform to ASTM F 1665 Type I.
2. **Woven wire fence fabric** shall conform to the requirements of AASHTO M279. Standard FE-W1 shall conform to Design No. 1047-6-11, Class 3 or No. 1047-6-12 1/2, Grade 125, Class 3. Standard FE-W2 shall conform to Design No. 1047-12-11, Class 3 or No. 1047-12-12 1/2, Grade 125, Class 3.
3. **Lawn Fence** shall be the type shown on the plans, a similar type that will match the existing fence, or as desired by the landowner and approved by the Engineer.
4. **Wood post and braces:**
- a. **Species of wood:** Posts and braces for standard fence shall be Southern pine, Ponderosa pine, Douglas fir, Western hemlock, larch, or white or red cedar as defined in AASHTO M168. Locust may be used for woven wire farm fence and barbed wire fence.
 - b. **Cutting requirements:** Round or square posts and braces shall be cut from live growing trees.
 - c. **Seasoning:** Posts and braces shall be sufficiently air seasoned in an approved manner for a suitable length of time under favorable climate conditions or otherwise conditioned as part of the treating process to permit adequate penetration of preservative without damage to the wood.
 - d. **Peeling:** Posts and braces shall have the inner bark removed to the extent defined by the SPIB. Knots and projections shall be cut or shaved smooth and flush with the surrounding surface of the unit.
 - e. **End finish:** Butt ends of posts shall be sawn square.
 - f. **Dimensions:** Posts shall not vary from the length specified on the plans by more than 1 inch. Thickness dimensions shall be undressed

dimensions and shall not vary from the dimensions shown on the plans by more than 1/4 inch.

- g. **Straightness:** Wood posts and braces shall be free from bends in more than one place and free from short or reverse bends. The straightness of the post or brace shall be such that a straight line from the center of the tip to the center of the butt shall not depart from the center of the post by more than 2 percent of the length.
- h. **Grading for square posts and braces:** Grading shall conform to the requirements of (b)4.a. herein.
- i. **Preservative treatment:** Posts and braces, except cedar and locust, shall be treated with a preservative in accordance with section 236 except that waterborne preservatives shall not be used in the treatment of posts and braces to be erected in marshy areas. Oil-borne preservatives shall not be used where the posts and braces will come into contact with salt water.

Cutting and trimming of the ends shall be performed prior to treatment.

- 5. **Metal posts and braces:** Post anchor plates shall have a surface area of at least 16 square inches. Posts shall be in accordance with the following:
 - a. **Steel posts and braces** shall be galvanized and shall conform to the requirements of Section 233 of the Specifications.
 - b. **Galvanized pipe** conforming to the requirements of (a)5.d. herein.
- 6. **Gates** similar in type to those that exist may be substituted for gates shown on the plans or standard drawings if preferred by the landowner and approved by the Engineer.
- 7. **Brace wire** shall be 9 gage and shall conform to AASHTO M279 No 9 Grade 60 Class 3.

(c) Temporary Silt Fences, Geotextile Fabric, Silt Barriers, and Filter Barriers:

- 1. **Geotextile fabric** shall conform to the requirements of Section 245.
- 2. **Posts for temporary silt fences** shall be a nominal 2 1/2 by 2 1/2 inch or a 3-inch diameter No. 2 Southern pine, a nominal 2 by 2 inch oak, or steel having a weight of at least 1.25 pounds per linear foot and a length of at least 5 feet.
- 3. **Supports for temporary filter barriers** shall be a nominal 1 by 2 inch or 1 1/2 inch diameter No. 2 Southern Pine or oak, or steel having a weight of at least 1.00 pound per linear foot and a length of at least 2.5 feet.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
CONCRETE SURFACE PENETRANT SEALER

August 1, 1991
Reissued July 9, 2002

I. DESCRIPTION

This work shall consist of furnishing and applying a water repellant concrete surface penetrant in accordance with this provision and in reasonably close conformity with the details and locations indicated on the plans. The color of the penetrant sealer shall be clear.

Unless noted otherwise in the plans, concrete surface penetrant sealer shall be applied to the following areas:

- 1. Top surface of concrete deck (after deck grooving is complete)*
- 2. Top surface of sidewalk (including sidewalk spans), abutment wingwalls (Abutment A and B), and parapets*
- 3. Faces of sidewalk curbs on deck and abutment wingwalls.*
- 4. Inside faces of parapets*

II. MATERIALS

The penetrant sealer used in the performance of this work shall be a product as listed on the Department's current list of approved penetrating sealers.

III. CONSTRUCTION METHODS

The penetrant sealer shall be applied in accordance with the manufacturer's recommendations, except as otherwise specified herein. The penetrant sealer shall not be applied until all adjacent or superimposed concrete placements have been completed. All surfaces to receive the penetrant sealer shall be sandblasted to provide a clean uniform texture free of foreign substances such as oils, release agents, curing agents or efflorescence. All sandblasting residue shall be completely removed prior to application of the penetrant sealer.

Each container of penetrant sealer material shall be thoroughly mixed in strict compliance with the manufacturer's recommendations. The penetrant sealer material shall be applied by experienced persons using spray, brush or roller and shall not be thinned or reduced, except as may be specifically required by the manufacturer.

The rates of application and number of coats shall be in accordance with the manufacturer's recommendations.

IV. METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Concrete surface penetrant sealer will be measured in square yards and will be paid for at the contract unit price per square yard, which price shall be full compensation for surface preparation and for applying sealer.

Payment will be made under:

Pay Item	Pay Unit
Concrete Surface Penetrant Sealer	Square Yard

SPECIAL PROVISION FOR EPOXY BONDING COMPOUND

I. DESCRIPTION

1.01 Summary

A. This specification describes the use of a bonding bridge between new portland-cement mortar or concrete and hardened portland-cement mortar or concrete.

1.02 Quality Assurance

A. Manufacturing qualifications: The manufacturer of the specified product shall have in existence a recognized quality assurance program and be ISO 9001 Certified, a program of training, certifying and technically supporting a nationally-organized Approved Contractor Program with a re-certification program of its participants for a minimum of 5 years.

B. Contractor qualifications: Contractor shall be an Approved Contractor of the manufacturer of the specified product, who has completed a program of instruction in the use of the specified coating material, and provides a certification from the manufacturer attesting to its Approved Contractor status.

C. Install materials in accordance with all safety and weather conditions required by manufacturer, or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.

1.03 Delivery, Storage, and Handling

A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material must be removed from the site immediately.

B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.

C. Condition the specified product as recommended by the manufacturer.

1.04 Job Conditions

A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 40°F (5°C) and rising.

B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified coating.

1.05 Submittals

A. Submit two copies of manufacturer's literature, to include: Product Data Sheet, System Data Sheet, Application Guide, and appropriate Material Safety Data Sheets (MSDS).

B. Submit copy of Certificate of Approved Contractor status by manufacturer.

1.06 Warranty

- A. Provide a written warranty from the manufacturer against defects of materials for a period of five(5) years, beginning with date of substantial completion of the project.

II. MATERIALS

2.01 Manufacturers

- A. **Sika Armattec 110 EpoCem**, as manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071 is considered to conform to the requirements of this specification.

2.02 Materials

- A. Epoxy resin/portland cement adhesive shall be **Sika Armattec 110 EpoCem**
 - 1. Component “A” shall be an epoxy resin/water emulsion containing suitable viscosity control agents. It shall not contain butyl glycidyl ether.
 - 2. Component “B” shall be primarily a water solution of a polyamine.
 - 3. Component “C” shall be a blend of selected portland cements and sands.
 - 4. The material shall not contain asbestos.

2.03 Performance Criteria

- A. Properties of the mixed epoxy resin/portland cement adhesive.
 - 1. Pot Life: 90 minutes @ 73° F
 - 2. Contact Time: 95oF (35oC) 6 hours
68oF (20oC) 12 hours
50oF (10oC) 16 hours
40oF (5oC) 24 hours
 - 3. Color: dark gray
- B. Properties of the cured epoxy resin/portland cement adhesive.
 - 1. Compressive Strength (ASTM C-109)
 - a. 3 day: 4500 psi (31.0 MPa)
 - b. 7 day: 6500 psi (44.8 MPa)
 - c. 28 day: 8500 psi (58.6 MPa)
 - 2. Splitting Tensile Strength (ASTM C-496)
 - a. 28 days: 600 psi (4.1 MPa)
 - 3. Flexural Strength (ASTM C-348)
 - a. 1250 psi (8.6 MPa)
 - 4. Bond Strength ASTM C-882 at 14 days
 - a. Wet on Wet, 0-hr. open time: 2800 psi (19.3 MPa)
 - b. 24-hr. open time: 2600 psi (17.9 MPa)
 - 5. Bond of Steel Reinforcement to Concrete (Pullout Test)
 - a. Sika Armattec 110 coated 625-psi (4.3 MPa)
 - b. Epoxy coated 508 psi (3.5 MPa)
 - c. Plain Reinforcement 573 psi (3.95 MPa)
 - 6. The epoxy resin/portland cement adhesive shall not produce a vapor barrier.
 - 7. Material must be proven to prevent corrosion of reinforcing steel when tested under the procedures as set forth by the Federal Highway Administration Program Report No. FHWA/RD86/193. Proof shall be in the form of an independent

testing laboratory corrosion report showing prevention of corrosion of the reinforcing steel. Note: Tests above were performed with material and curing conditions at 73°F and 45-55% relative humidity.

iii. EXECUTION

3.01 Mixing and Application

A. Mixing the epoxy resin: Shake contents of Components “A” and Component “B”. Completely empty both components into a clean, dry mixing pail. Mix thoroughly for 30 seconds using a jiffy paddle with a low-speed (400-600 rpm) drill. Slowly add the entire contents of Component “C” while continuing to mix for 3 minutes until uniform with no lumps. Mix only that quantity that can be applied within its pot life.

B. Placement procedure for Bonding bridge:

1. Pre-wet surface to saturated surface dry (SSD). Apply to prepared surface with a stiff-bristle brush, broom or “hopper type” spray equipment.

a. For hand-applied mortars - Place fresh, plastic concrete/mortar while the bonding bridge adhesive is “wet” or within open times indicated in section 2.03.A.2.

b. For machine-applied mortars - Apply while the bonding bridge adhesive is “wet” or within the open times indicated in section 2.03.A.2.

C. Placement procedures for anti-corrosion coating:

1. Apply to prepared steel surface with a stiff-bristle brush, or "hopper type" spray equipment at 20 mils minimum thickness. Properly coat the underside of the totally exposed steel. Allow to dry (approx. 2-3 hours) then apply a second coat at 20 mils minimum thickness. Allow drying again before placing repair mortar.

* During the anti-corrosion coating method, after applying the second coat Sika Armatec 110 EpoCem, a mortar can be applied to "wet" Sika Armatec 110 EpoCem or within open times indicated in section 2.03.A.2 to achieve the benefit of bonding bridge.

D. Adhere to all limitations and cautions for the epoxy resin/portland cement adhesive in the manufacturers current printed literature.

3.02 Cleaning

A. The uncured epoxy resin/portland cement adhesive can be cleaned from tools with water. The cured epoxy resin/portland cement adhesive can only be removed mechanically.

B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

SPECIAL PROVISION FOR ANTI-GRAFFITI PROTECTION

I. DESCRIPTION

This work shall consist of furnishing and applying Anti-Graffiti Protection coating in accordance with this provision and in reasonably close conformity with the details and locations indicated on the plans. The color of the coating shall be similar to the Federal Standard Color Number specified on the plans or as approved by the Engineer.

Except as otherwise specified on the plans, the concrete surface color coating shall be applied to the following surfaces of the bridge structure:

- a. Existing exposed surfaces of abutment walls from top of footing to the limits of demolition at the beam seat.
- b. Existing exposed surfaces of abutment wingwalls from 6 inches below finished grade to 6 inches above the bottom of the adjacent sidewalk beam.
- c. All surfaces of parapet walls and the edges of deck slab and sidewalk (including sidewalk spans).

Concrete surface color coating shall be applied to other exposed surfaces of concrete structures as specified on the plans.

II. MATERIALS

The Anti-Graffiti Protection used in the performance of this work shall be a product as listed on the Virginia Department of Transportation's current list of approved Anti-Graffiti coatings, or as approved by the Engineer.

III. CONSTRUCTION METHODS

The Anti-Graffiti Protection coating shall be applied in accordance with the manufacturer's recommendations, except as otherwise specified herein. The coating shall not be applied until all concrete placement operations for the particular structure have been completed. All surfaces to receive the coating shall be prepared to provide a clean uniform texture free of foreign substances such as oils, release agents, curing agents or efflorescence. All cleaning residue shall be completely removed prior to application of the coating.

The coating material shall be applied by experienced persons using spray, brush or roller and shall not be thinned or reduced, except as may be specifically required by the manufacturer. The rates of application and number of coats shall be in accordance with the manufacturer's recommendations. Surfaces not to be treated shall be protected from splatter.

Materials shall be delivered to the job site in sealed containers bearing the manufacturer's labels. Materials shall be mixed and applied in accordance with the manufacturer's printed instructions of which two copies shall be furnished the Engineer.

IV. METHOD OF MEASUREMENT AND BASIS OF PAYMENT

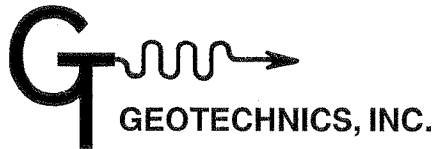
Anti-Graffiti Protection will be paid for on a lump sum basis wherein no other measurement will be made and will be paid for at the contract lump sum price which price shall be full compensation for preparation of surfaces and for applying coating.

Payment will be made under:

Pay Item	Pay Unit
Anti-Graffiti Protection	Lump Sum

ATTACHMENT 1

GEOTECHNICAL REPORT



Telephone (540) 966-4795
Fax (540) 992-4234

9 March 2004

686 Lee Highway South
Roanoke, Virginia 24019

HSMM
P.O. Box 13446
Roanoke, VA 24043

Attention: Mr. Randy Thomas

Re: Bedford Avenue Bridge
Over NS Railroad
Lynchburg, VA
Geotechnics No. 3074

Gentlemen:

One (1) bridge deck core boring, one (1) soil test boring, six (6) auger probe borings and one (1) horizontal core boring were made at the above identified site on the 23rd, 24th and 25th of February 2004. The boring locations were recorded in the field by HSMM personnel. See the attached boring logs for a detailed description of the materials encountered.

Borings No. 1, 2, 3 and 4 were made on the 23rd of February 2004. Boring No. 1 (bridge deck core boring) was advanced through the asphalt pavement, brick pavers and concrete bridge deck with N-series drill casing. The concrete bridge deck was encountered at a depth of 1.1 feet and was 2.3 feet thick.

Boring No. 2 (soil test boring) was made at the east bridge approach. This boring penetrated a 0.8 foot thickness of asphalt pavement underlain by a 1.6 foot thickness of crushed stone. Man-made fill was encountered from a depth of 2.4 feet to the top of the concrete footing at 24.9 feet. The man-made fill was relatively soft with Standard Penetration Test N-Values ranging from 4 blows per foot to 5 blows per foot.

Boring No. 3 (auger probe) penetrated a 0.8 foot thickness of asphalt pavement underlain by a 0.3 foot thickness of crushed stone. Concrete was encountered from 1.1 feet to auger refusal at 1.2 feet.

Boring No. 4 (auger probe) penetrated a 0.8 foot thickness of asphalt pavement underlain by a 0.5 foot thickness of crushed stone. Concrete was encountered from 1.3 feet to auger refusal at 1.4 feet. The edge of the concrete wall was encountered in the west side of the borehole.

Boring No. 5 was a horizontal core boring drilled in the south wall of the west abutment on the 24th of February 2004. The core hole encountered steel reinforcing after penetrating about 9.25 inches. The steel covered roughly one-third (1/3) of the diameter of the hole, and the horizontal core hole refused on the steel reinforcing after penetrating about 10 and 5/8 inch.

The concrete core from the horizontal core hole was prepared for compressive strength testing. The test specimen was 6.7 inches long and 2.69 inches in diameter. The air-dry density was 144.6 PCF. The concrete core sample split vertically, and the compressive strength was 1,970 PSI.

Borings No. 6, 7, 8 and 9 were made on the 25th of February 2004. Boring No. 6 (auger probe) penetrated a 0.1 foot thickness of asphalt pavement underlain by a 1.1 foot thickness of concrete sidewalk. There was a void beneath the concrete from roughly 1.2 feet to about 2.5 feet. Orange-tan and reddish-tan clayey silt was penetrated from 2.5 feet to 7.0 feet. At a depth of 7.0 feet, the augers deflected on the concrete wall and the boring was terminated at a depth of 7.7 feet.

Boring No. 7 (auger probe) penetrated a 0.7 foot thickness of asphalt pavement underlain by a 0.8 foot thickness of crushed stone. Orange-tan and reddish-tan clayey silt was encountered from a depth of 1.5 feet to auger refusal on the concrete footing at a depth of 24.9 feet.

Boring No. 8 (auger probe) penetrated a 0.8 foot thickness of asphalt pavement underlain by a 1.6 foot thickness of crushed stone. Orange-tan and reddish-tan clayey silt was encountered from a depth of 2.4 feet to auger refusal on the concrete footing at a depth of 14.7 feet.

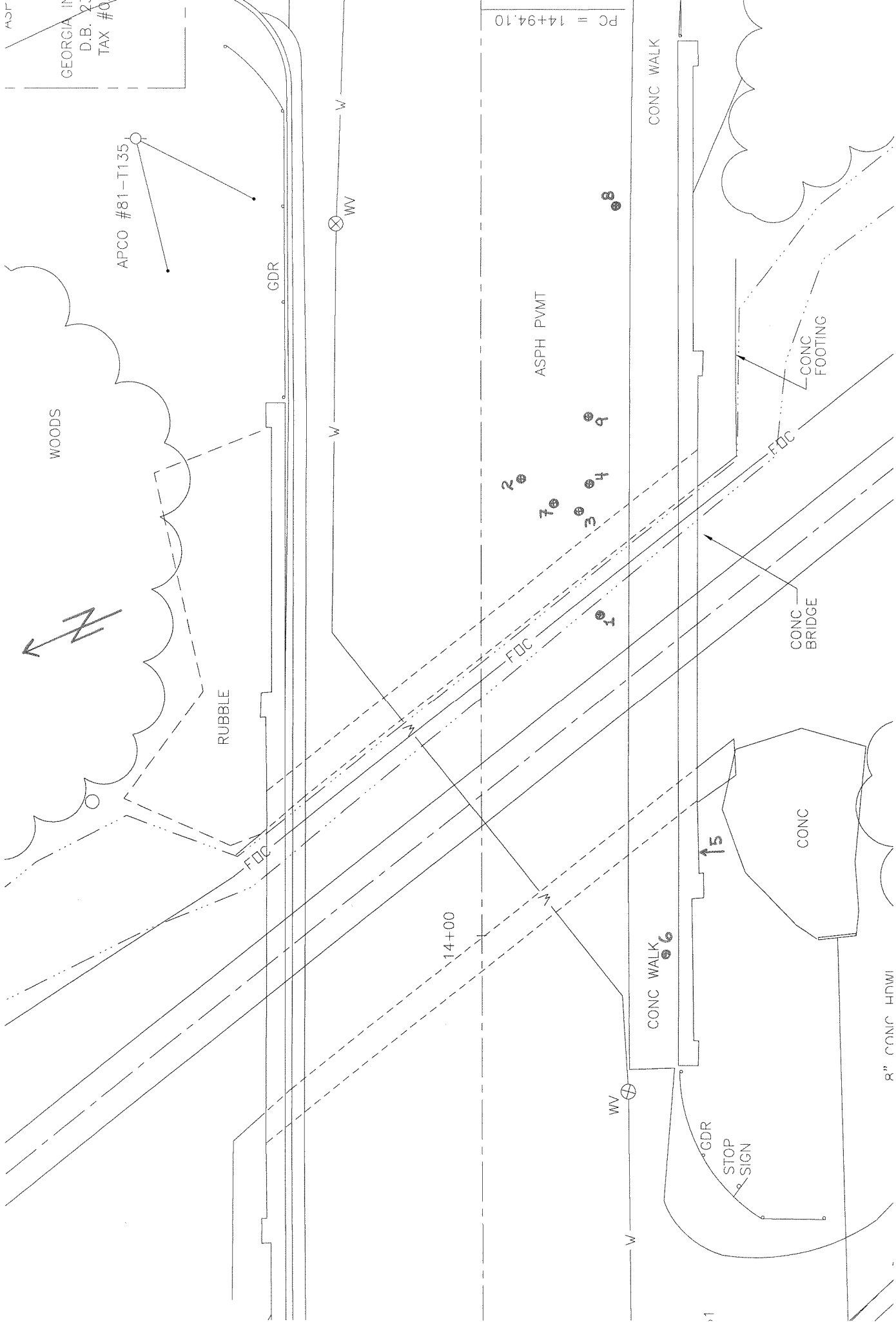
Boring No. 9 (auger probe) penetrated a 1.0 foot thickness of asphalt pavement underlain by a 1.4 foot thickness of crushed stone. Orange-tan and reddish-tan clayey silt was encountered from a depth of 2.4 feet to auger refusal on the concrete footing at a depth of 24.9 feet.

We trust this information is satisfactory for your purposes.

Very truly yours,

Geotechnics Inc.


John R. Cutright, P.E.



BORING LAYOUT SCHEMATIC
N.T.S.

PC = 14+94.10

GEORGIA IN
D.B. 2
TAX #0

APCO #81-T135

ASPH PVMT

CONC WALK

CONC
FOOTING

CONC
BRIDGE

CONC

8" CONC HDWI

STOP
SIGN

CONC WALK

WV

14+00

WV

GDR

RUBBLE

WOODS



Location **BEDFORD AVE. BRIDGE
OVER NS RAILROAD
LYNCHBURG, VA**

BORING LOG
Structure Bridge Deck

Comm. No. 3074

Sheet 1 of 1

Boring No. 1

Date 23 FEB 04

Contractor Geotechnics, Inc.

Engineer JRC

[illegible]

Vertical Scale: 1" = 4'

Date 23 FEB 04

GEOTECHNICS Form 10

Vertical Scale: 1" = 4'

Date 23 FEB 04

Vertical Scale: 1" = 4'

Date 23 FEB 04

W.L. @ Completion: Dry
Hole Backfilled
Edge of Concrete Wall
Encountered in Side of Hole
Toward RR Tracks.

Date 24 FEB 04

GEOTECHNICS Form 10

Vertical Scale: 1" = 4'

Date 25 FEB 04[illegible]

Date 25 FEB 04

GEOTECHNICS Form 10

Vertical Scale: 1" = 4'

Date 25 FEB 04

[illegible]

Location BEDFORD AVE. BRIDGE
OVER NS RAILROAD
LYNCHBURG, VA

Contractor Geotechnics, Inc.

BORING LOG

Structure Bridge Approach

Geologist _____

Engineer JRC

Comm. No. 3074

Sheet 1 of 1

Boring No. 9

Date 25 FEB 04

Stratification			Description of Materials (Type, color & Consistency)	Sampler or Spoon		Sample No.	Misc. Data
Elevation	Depth	Legend		Blows	Penetration		Length of hole 24.9'
	0.0						Rock ----
	1.0		ASPHALT PAVEMENT				Wt. of hammer 140 #
	2.4		Crushed Stone				Avg. fall of hammer 30"
			Orange-Tan and Reddish-Tan Clayey SILT				El of ground water ----
							REMARKS
	24.9		CONCRETE Auger Refusal BOTTOM OF HOLE				W.L. @ Completion: Dry Hole Backfilled